



Planning Commission Regular Agenda

COUNCIL CHAMBERS
AUGUST 4, 2011
7:00 P.M.

I. CALL TO ORDER

II. ROLL CALL

III. APPROVAL OF MINUTES June 2, 2011 Workshop
June 2, 2011 Public Hearing
July 7, 2011 Workshop
July 7, 2011 Public Hearing

IV. WITHDRAWALS AND CONTINUANCES

V. PUBLIC HEARING ITEM

1. **ZTA09-01:** A request by the City of Glendale Planning Commission to amend Article 7 General Development Standards. The proposed changes, if adopted, would amend sections of the zoning ordinance pertaining to Freeway Billboard Signs. Staff contact: Thomas Ritz, AICP, Senior Planner (City-Wide).

VI. OTHER BUSINESS

VII. OTHER BUSINESS FROM THE FLOOR

VIII. PLANNING STAFF REPORT

IX. COMMISSION COMMENTS AND SUGGESTIONS

X. NEXT MEETING: September 1, 2011

XI. ADJOURNMENT

FOR SPECIAL ACCOMMODATIONS



Please contact Diana Figueroa at (623) 930-2808 or dfigueroa@glendaleaz.com at least three working days prior to the meeting if you require special accommodations due to a disability. Hearing impaired persons should call (623) 930-2197.

After 5:00 p.m. on Monday, prior to the meeting, staff reports for the above referenced cases will be available online at <http://www.glendaleaz.com/planning/boardsandcommissions.cfm>. If after reviewing the material you require further assistance, please call the staff contact listed for each application at (623) 930-2800.

In accordance with [Title 38](#) of the Arizona Revised Statute (A.R.S.), upon a public majority vote of a quorum of the Planning Commission, the Commission may hold an executive session, which will not be open to the public, regarding any item listed on the agenda but only for the following purpose:

- (i) discussion or consideration of records exempt by law from public inspection (A.R.S. § 38-431.03(A)(2));
- (ii) discussion or consultation for legal advice with the city's attorneys (A.R.S. § 38-431.03(A)(3)); or
- (iii) discussion of consultation with the city's attorneys regarding the city's position regarding contracts that are the subject of negotiations, in pending or contemplated litigation, or in settlement discussions conducted in order to avoid or resolve litigation (A.R.S. § 38-431.03(A)(4)).

Confidentiality Requirements Pursuant to A.R.S. § 38-431.03(C)(D): Any person receiving executive session information pursuant to A.R.S. § 38-431.02 shall not disclose that information except to the Attorney General or County Attorney by agreement of the Planning Commission, or as otherwise ordered by a court of competent jurisdiction.



Planning Department Staff Report

DATE: August 4, 2011 **AGENDA ITEM:** /

TO: Planning Commission

FROM: Tabitha Perry, Principal Planner
PRESENTED BY: Thomas Ritz, AICP, Senior Planner

SUBJECT: **ZONING ORDINANCE TEXT AMENDMENT ZTA09-01:
ZONING ORDINANCE UPDATE – CITYWIDE**

REQUEST: A request by the City of Glendale to amend the Zoning Ordinance to allow Freeway Billboard Signs (FBS).

REQUIRED ACTION: The Planning Commission must conduct a public hearing and determine if this request is consistent with the General Plan and Zoning Ordinance.

PREVIOUS ACTION: On June 2, 2011, the Planning Commission voted to recommend approval of ZTA09-01 with the exception of the section regarding FBS. This item was continued for discussion at a future Planning Commission Workshop and consideration at a future Planning Commission meeting.

RECOMMENDATION: The Planning Commission should recommend approval.

PROPOSED MOTION: Move to recommend approval of ZTA09-01.

SUMMARY: This is a request to amend the Zoning Ordinance. This is a focused amendment, proposing changes to permit FBS.

COMMISSION ACTION: Motion made by Commissioner _____ to recommend approval. Motion seconded by Commissioner _____. The motion was approved ____ to ____.

DETAILS OF REQUEST:

The proposed changes will result in the amendment of the zoning ordinance to permit Freeway Billboard Signs.

- **Freeway Billboard Signs:** Following concerns that Freeway Billboard Signs were permitted only on land owned by the city, and as part of a lease agreement with the city, staff is proposing to permit Freeway Billboard Signs along the city's freeways and future Parkway. This new type of sign will match the height, size, and frequency of message change on existing freeway signs. Staff is proposing criteria that these are permitted only in the Planned Area Development (PAD) zoning district where development has already occurred. To ensure the continued viability of Luke Air Force Base, staff is proposing that prior to the installation of any new sign; the Base shall agree that the placement of these 80 foot high signs will not impact the continued operation of the base.

CITIZEN PARTICIPATION TO DATE:

Planning Commission Workshop and Planning Commission Public Hearing:

On June 2, 2011, the Planning Commission heard testimony in favor of the proposed ordinance, in opposition to the proposed ordinance, in favor of the proposed ordinance with amendments suggested from the audience that evening, and desiring additional amendments to the zoning ordinance to permit changeable message on-premise monument signs in the city, which is not a part of this Zoning Ordinance Amendment.

Planning Commission Public Hearing:

A Notice of Public Hearing was published in *The Glendale Star* on July 14, 2011. Notification postcards of the public hearing were mailed to the citywide interested parties on July 15, 2011.

Applicant's Citizen Participation Plan:

On May 14, 2009, notification letters were mailed to the citywide interested parties list. The Planning Department did not receive any response regarding the request. The Citizen Participation Final Report is attached.

Stakeholder's Meetings:

A total of six meetings were held with various stakeholder groups as identified by the Planning Department. Meetings were held in January and February 2009. From these meetings, an email list was developed and those on the list were notified when updates to the text amendment were available for comments. Several of the stakeholders did participate and provided comments. All of the comments received as part of the updates are available for viewing at the Planning Department. Overall, the responses to the changes were positive. The Homebuilders Association of Central Arizona reviewed the ZTA and had no comments or requests. The Arizona Multi-Housing Association reviewed the ZTA and made recommendations on signage. Valley Partnership reviewed the ZTA and found it to be well organized and thought out. The Arizona Wireless Association reviewed the ZTA and made recommendations.

STAFF FINDINGS AND ANALYSIS:

Findings:

- The Zoning Ordinance Update is a focused amendment, proposing an amendment which addresses a specific item, FBS, which continues to be of highest concern to the city's Leadership.
- The proposed zoning ordinance amendment will demonstrate staff's responsiveness to the issue.

Analysis:

- By providing a new section concerning FBS, the current section that addresses billboards will remain unchanged.
- The new section of FBS ensures that proposed site locations have demonstrated a significant existing investment in the community, and prevent placement on small sites which could negatively impact neighboring residential areas.
- Research conducted by the billboard industry indicates that billboards are not a distraction to motorists and do not pose a safety hazard.
- The proposal is responsive to items of significance including continued protection of residential neighborhoods from flashing signs.
- In addition to the stakeholder groups as noted above, an internal departmental review team was established to discuss changes to the document. Departments represented included: Building Safety, City Attorney, Code Compliance, Development Services, Economic Development, and Planning.
- During the latter part of 2009, staff attended all City Code Review Committee meetings to discuss and provide updates.

RECOMMENDATION:

The Planning Commission should recommend approval of ZTA09-01.

ATTACHMENTS:

1. Draft of Proposed Zoning Ordinance Amendments.
2. Citizen Participation Final Report (without mailing labels), approved June 2, 2011.
3. Citizen Comments.
4. Articles concerning sign safety.

PROJECT MANAGER: Thomas Ritz, AICP, Senior Planner (623) 930-2588
tritz@glendaleaz.com

REVIEWED BY:


Planning Director


Deputy City Manager

Zoning Text Amendment Application ZTA09-01: Zoning Ordinance Update

Draft of Proposed Zoning Ordinance Amendment for Freeway Billboard Signs Only

**July 25, 2011
Glendale, Arizona**

The text amendments (**additions in bold text**, *deletions in italics*) are as follows:

Add to Section 2.300 Definitions:

Sign, Freeway Billboard: An identification sign, or a sign which is intended to advertise a business, commodity, service, entertainment, product, or attraction sold, offered, or existing on or elsewhere than on the property where the sign is located and intended to be viewed primarily from SR 101, SR 303, or Northern Parkway.

...

Section 7.103 - Signs Prohibited Signs should be amended to read:

7.103.F. Signs with intermittent or flashing illumination, **except Freeway Billboard Signs**, and animated or moving signs.

...

Section 7.100 – Signs should be amended by adding a new Section 7.110:

7.110 Freeway Billboard Signs

A. Freeway Billboard Signs (FBS) are permitted in certain zoning districts subject to the regulations noted below.

- 1. Placing a Freeway Billboard Sign requires the lot to have a minimum of one thousand (1,000) feet of lineal frontage adjacent to one of the following:**
 - a. SR 101 (Agua Fria Freeway)**
 - b. SR 303 (Bob Stump Memorial Parkway)**
 - c. Northern Parkway**
- 2. Placing a Freeway Billboard Sign on a lot requires a minimum of 125,000 square feet of non-residential building area which has received a Certificate of Occupancy on the lot.**
- 3. The zoning of the lot on which the Freeway Billboard Sign is located must be Planned Area Development (PAD).**

4. One Freeway Billboard Sign is allowed for every six hundred sixty (660) lineal feet of freeway frontage on each side of the freeway.
5. The Freeway Billboard Sign must be located within three hundred (330) feet of the freeway right-of-way.
6. There shall be a minimum distance of six hundred sixty (660) feet between all Freeway Billboard Signs on any single lot.
7. All Freeway Billboard Signs must be set back a minimum of three hundred thirty (330) feet from the property line of any adjacent property having frontage on one of the routes listed in section 7.110.A.1.
8. Maximum sign height, including any supporting structures, for a Freeway Billboard Sign must be no more than eighty (80) feet.
9. Maximum Freeway Billboard Sign width must be no more than fifty (50) feet.
10. Maximum Freeway Billboard Sign area must not exceed six hundred sixty five (675) square feet.
11. The message or image of the Freeway Billboard Sign may be static or change at specific or programmed time intervals. The change in message or images shall occur no more frequently than once every eight (8) seconds and shall not have fade or dissolve transitions, or full animation or video, or similar subtle transitions or frame effects that have the appearance of moving text or images.
12. Provisions in this section supplement and do not supersede provisions of any PAD in existence before the effective date of this ordinance.
13. Design Review approval is required to allow any Freeway Billboard Sign, including those within any PAD in existence before the effective date of this ordinance.
14. Any application for development or construction of a Freeway Billboard Sign shall submit a Federal Aviation Form 7460-1 to the local Federal Aviation Administration office for review. A positive recommendation from the Federal Aviation Administration stating the Freeway Billboard Sign has no negative effect on any airport or

navigational airspace must be received prior to Design Review approval.

- 15. The Glendale Municipal Airport Manager and Luke Air Force Base shall be informed of all requests for Freeway Billboard Sign. The Airport Manager and a representative of the Base shall both state that the Freeway Billboard Sign has no impact on facility operations prior to Design Review approval.**
- 16. The minimum setback standard of Section 7.110.A.7 may be reduced by the Zoning Administrator upon a showing by the property owner that strict application of the standard to a specific sign installation will cause a potential hazard to motorist safety due to visibility limitations caused by:**
 - a. Existing or proposed structures; or**
 - b. Grade or elevation changes at or near the subject property; or**
 - c. Proximity to existing or proposed bridges, overpasses or other similar roadway features; or**
 - d. Curvature or other design feature of the adjacent freeway.**

CITIZEN PARTICIPATION FINAL REPORT

FOR

PLANNING COMMISSION INITIATED
ZONING ORDINANCE TEXT AMENDMENT

ZONING TEXT AMENDMENT

ZTA09-01

ZONING ORDINANCE TEXT AMENDMENTS TO
VARIOUS SECTIONS OF THE ZONING ORDINANCE



PREPARED ON: June 2, 2011

PREPARED BY:

Thomas Ritz, AICP

Senior Planner

City of Glendale Planning Department

APPROVED

SIGNATURE

DATE

June 2, 2011

PROJECT DESCRIPTION

A request by City of Glendale Planning Department to amend various sections of the Zoning Ordinance. The request will create an ordinance that will allow flexibility in facilitating the development process, encourage citizen participation efforts while continuing to maintain the character of residential neighborhoods.

PUBLIC NOTIFICATION AND CITIZEN PARTICIPATION TECHNIQUES USED

A notification letter was sent to those on the Citywide Interested Parties List on May 14, 2009. Postcards were sent to those on the Citywide Interested Parties List on May 13, 2011. Staff did not receive any telephone calls or email inquiries as a result of the mailing of that letter.

In addition to sending letters to those on the Citywide Interested Parties List, a group of both internal and external stakeholders were formed to assist and provide comment on the proposed changes to the Zoning Ordinance. An email distribution list was created of all the stakeholders.

The proposed changes were posted to the Planning Department's page of the city's website beginning in April 2011. During the next several months, additional sections of the revised ordinance were posted. With each posting, an email was sent to the internal and external stakeholders asking for their comments.

The above method of communication was successful in obtaining comments regarding the proposed changes.

WHAT WAS THE AREA OF NOTIFICATION?

Notification was sent to individuals listed on the citywide interested parties lists maintained by the Planning Department. A list of all individuals to be notified is attached as Exhibit B. The zoning text amendment announcement for all public hearings was also published in *The Glendale Star* as part of the required process.

NUMBER OF PEOPLE WHO PARTICIPATED IN THE PROCESS

There were several individuals who contacted the Planning Department regarding the proposed changes.



July 26, 2011

Thomas Ritz
Senior Planner
City of Glendale Planning Department
5850 West Glendale Avenue
Glendale, Arizona 85301

**RE: Proposed Billboard Regulation/
Zoning Ordinance Text Amendment**

Dear Thomas:

In follow up to our meeting with Jon Froke in Late June, this letter is submitted on behalf of EMRLAND LLLP ("EMRLAND"). We request that this letter be included in the Planning Commission packet prior to the August 4th hearing.

As you know EMRLAND opposes the billboard regulation in its current form for the following reasons:

- The 125,000 square foot development requirement is unreasonable and unfair and should be deleted in its entirety.
 - There is no need for the "triple spacing" requirement – i.e. the 1000' lineal frontage requirement, separation between boards and the setback from neighboring properties.
 - We suggest that the 1000' lineal frontage requirement be deleted in its entirety and contend that the separation requirement between boards is sufficient to prevent clustering of billboards.
-
-

- If the 1000' lineal frontage requirement is retained in the regulation, the separation requirement between boards should apply only to neighboring properties which would otherwise qualify for a billboard. In other words, if the neighboring property does not qualify for a billboard, there should be no setback against the neighboring property.
- The airport approval requirement should apply only with respect to properties that are in the flight path to the airport and not generally across the board to all properties.
- Properties that do not immediately abut the freeway but that are separated only by a frontage road or city street should be included with the properties allowed to host a billboard

In addition to the text changes set forth above, our most serious concerns revolve around the appearance of a double standard and unfair playing field. Glendale is the only owner of property in the area that houses two digital billboards. Glendale derived and continues to derive an income stream from the rental of the billboard space to American Outdoor. The American Outdoor digital billboards on Glendale's property would not comply with the regulation as it is currently written.

- The Glendale Park N Ride property was not a PAD zoned property when the billboards were installed (zoned "Parking") and is now a nominal "Parking Lot PAD" rather than a true planned area multi-use development.
- The Glendale Park N Ride property has little or no vertical development, let alone does it meet the 125,000 square foot development requirement.
- The southern billboard on the site does not comply with the 330 foot setback from adjacent property.

It is also our understanding that Glendale has approved two additional billboards (yet to be installed) on Glendale-owned property at the NWC of SR 101 and Camelback Road (Maricopa County Tax Parcel No. 102-14-002Q) as well as at the NWC of SR 101 and Bethany Home Road (Maricopa County Tax Parcel No. 102-01-010M). The Camelback parcel houses a sewer lift station and is slightly over one acre in size. While the Bethany Home parcel larger, it is

undeveloped land. Neither parcel complies with the substantive or technical requirements set forth in the regulation as proposed.

Given Glendale's commercial benefit from its dealing with American Outdoor and the clear inequity between what Glendale did with American Outdoor and what Glendale is proposing private property owners must comply with, it appears as if Glendale is attempting to protect its commercial interests by way of anti-competitive regulation imposed on nearby property owners. This surely is not the way Glendale should be treating private property owners like the Rovey Family who have played an integral part in the development of the Sports and Entertainment District.

Private property owners should be entitled to at least the same benefits and advantages in using their land as the City enjoys. Therefore, we hope that Staff and the Planning Commission will take these suggestions with a sense of open-mindedness and fairness and allow EMRLAND and the other property owners to have the same commercial opportunities as does the City.

Sincerely,

 *Jon Paladini Law PLLC*

/s/ Jon M. Paladini

Jon M. Paladini

Digital sign boon for auto mall, Avondale

By David Madrid

The Arizona Republic

The 75-foot-tall digital sign near Interstate 10 and Loop 101 is a powerful advertising tool for auto dealers at the Avondale Auto Mall.

The state-of-the-art, full-color LED display is an effective sign with which the dealers and the city seek to grab the attention of the occupants of 175,000 vehicles a day that pass on I-10.

The sign is designed to lure drivers to the mall with advertising and special deals. It is said to be a much-needed improvement over the old, static monument sign that stood there before.

The sign attracts customers in an economy that hasn't been all that friendly to car sales the past couple of years.

The Avondale Auto Mall, south of I-10, is one of Avondale's top sales-tax-revenue generators and a significant employer.

Mike Little, general manager of Avondale Nissan, 10305 W. Papago Freeway, said the sign has helped.

Consider drivers on the freeway, he said.

"A lot of them are sitting in gridlock, so they can't get away from us," Little said.

Car sales have picked up considerably. The dealers at the mall have seen about a 30 percent increase in sales over last year, Little said.

Although that can't all be attributed to the sign that rotates messages every eight seconds, it has helped significantly, he said. The sign has been working since earlier this year.

A major reason for the increase in sales is that manufacturers have been much more aggressive in offering incentives to dealers and buyers.

"They've created better interest rates as well as money back to the consumer and dealer that they just didn't do a year ago," Little said.

He said sales have been helped by a slightly better economy and more lenders returning to the automotive sector and aggressively looking for customers.

And then there is the digital sign.

Little said that Dan Davis, Avondale's economic-development director, believed the sign should tout Avondale's low sales-tax rate of 1.5 percent on retail purchases of more than \$5,000.

The sign has given the auto dealers of the mall a huge advantage, Little said. Just as people think of Anthem when they think of factory outlet malls, people are beginning to think of the auto mall when they think of Avondale, he said.

Davis said the city met with the auto dealers and assisted them in transforming the old pylon sign into a \$736,000 dig-



Santiago Roman details a vehicle at Avondale Nissan. The dealership's general manager said car sales have picked up.

AVONDALE AUTO MALL DIGITAL-SIGN DIMENSIONS

Digital-sign height: 75 feet.

Display-screen width: 33 feet, 11 inches.

Display-screen height: 19 feet, 10 inches.

Display width: 6 feet.

ital sign that includes the city in the ad rotation. Avondale gets one advertisement out of every five ad rotations to promote city facilities and city-sponsored programs, events and services.

"We've had a few different things up there," Davis said.

"In the spring, we had the Tres Rios Nature Festival. A couple of weeks prior to that we ran a rotation promoting that event.

"We've tried to focus in on community-wide type of events or general messages, whether it's the auto mall or shopping in Avondale, things of the general nature that are either community-service type of messages or messages that promote economic activity in Avondale," he said.

Davis said if the city were to rent advertising space on a digital billboard, he estimates it could cost \$3,000 to \$4,000 a month.

"So essentially, we're getting that for free," he said.

The city paid the initial \$78,400 down payment to build the sign, Davis said.

The refundable deposit will be repaid to the city by the auto dealers over four years in annual installments of \$19,600.

Avondale approved an agreement with the Avondale Auto Mall Advertising Association Inc. to build the sign on Sept. 20.

The city and dealerships formed the association to advertise in a collaborative manner.

"We should have thought of it a long time ago," Little said.

Ritz, Thomas

From: Froke, Jon
Sent: Tuesday, May 24, 2011 11:24 AM
To: Ritz, Thomas
Subject: Text Amendment - Revised
Attachments: Section 7-110 Red Line.pdf; Section 7-110 Revised Text Only.pdf

Thomas

Lets discuss this when you return from MAG.

Jon

From: Wood, Nick [mailto:nwood@swlaw.com]
Sent: Monday, May 23, 2011 1:34 PM
To: Froke, Jon
Cc: Colson, Jim; 'Cashen@dfri.us'; Griemsmann, Noel; Sampson, Donna
Subject: Text Amendment - Revised

Jon, please find attached a Red-Line and a Clean Copy of the Text Amendment that contains the "discretionary" language that we discussed last week.

In addition, we made a few tweaks to the distance requirements within a PAD.

For example, when cbd 101, Bella Villagio, and other PAD's commence development, even though the City has already controlled the number of signs allowed within the PAD area, it is very likely that the property will be subdivided so that individual pads can be sold. That subdivision process would very likely create conflicts with the original language of the text amendment that requires distances to be measured strictly from Lot Lines rather than from the boundaries of the PAD area.

This works since only property that is subject to a PAD can take advantage of the Ordinance.

In any event, please take a look and let us know your thoughts.

Regards,

Nick

Snell & Wilmer, LLP
One Arizona Center
Phoenix, AZ 85004-2202
www.swlaw.com

Ritz, Thomas

From: Froke, Jon
Sent: Tuesday, May 24, 2011 11:24 AM
To: Ritz, Thomas
Subject: Text Amendment - Revised
Attachments: Section 7-110 Red Line.pdf; Section 7-110 Revised Text Only.pdf

Thomas

Lets discuss this when you return from MAG.

Jon

From: Wood, Nick [mailto:nwood@swlaw.com]
Sent: Monday, May 23, 2011 1:34 PM
To: Froke, Jon
Cc: Colson, Jim; 'Cashen@dfri.us'; Griemsmann, Noel; Sampson, Donna
Subject: Text Amendment - Revised

Jon, please find attached a Red-Line and a Clean Copy of the Text Amendment that contains the "discretionary" language that we discussed last week.

In addition, we made a few tweaks to the distance requirements within a PAD.

For example, when cbd 101, Bella Villagio, and other PAD's commence development, even though the City has already controlled the number of signs allowed within the PAD area, it is very likely that the property will be subdivided so that individual pads can be sold. That subdivision process would very likely create conflicts with the original language of the text amendment that requires distances to be measured strictly from Lot Lines rather than from the boundaries of the PAD area.

This works since only property that is subject to a PAD can take advantage of the Ordinance.

In any event, please take a look and let us know your thoughts.

Regards,

Nick

Snell & Wilmer, LLP
One Arizona Center
Phoenix, AZ 85004-2202
www.swlaw.com

Section 7.100 – Signs should be amended by adding a new Section 7.110:

7.110 Freeway Billboard Signs

A. Freeway Billboard Signs (FBS) are permitted in certain zoning districts subject to the regulations noted below.

1. The zoning of the lot property on which the Freeway Billboard Sign is located must be zoned Planned Area Development (PAD).

2. Placing a Freeway Billboard Sign requires the lot PAD to have, in the aggregate, a minimum of one thousand (1,000) feet of lineal frontage adjacent to one of the following:

- a. SR 101 (Agua Fria Freeway)
- b. SR 303 (Bob Stump Memorial Parkway)
- c. Northern Parkway

3. Placing a Freeway Billboard Sign on a lot property, within a PAD, requires a minimum of 125,000 100,000 square feet of building area which has received a Certificate of Occupancy on the lot, be within the PAD.

~~3. The zoning of the lot on which the Freeway Billboard Sign is located must be Planned Area Development (PAD).~~

4. One Freeway Billboard Sign is allowed for every six hundred sixty (660) lineal feet of a PAD's freeway frontage on each side of the freeway.

5. The Freeway Billboard Sign must be located within three hundred (330) feet of the freeway right-of-way.

6. There shall be a minimum distance of six hundred sixty (660) feet between all Freeway Billboard Signs on within any single lot PAD.

7. All Freeway Billboard Signs must be set back a minimum of three hundred thirty (330) feet from the property line of any adjacent property having frontage on one of the routes listed in Section 7.110.A.1 2.

8. Maximum sign height, including any supporting structures, for a Freeway Billboard Sign must be no more than eighty (80) feet.

9. Maximum Freeway Billboard Sign width must be no more than fifty (50) feet.

10. Maximum Freeway Billboard Sign area must not exceed six hundred sixty five (675) square feet.

11. The message or image of the Freeway Billboard Sign may be static or change a specific or programmed time intervals. The change in message or images shall occur no more frequently than once every eight (8) seconds and shall not have fade or dissolve transitions, or full animation or video, or similar subtle transitions or frame effects that have the appearance of moving text or images.

12. Provisions in this section supplement and do not supersede provisions of any PAD in existence before the effective date of this ordinance.

13. Design Review approval is required to allow any Freeway Billboard Sign, including those within any PAD in existence before the effective date of this ordinance.

14. Any application for development or construction of a Freeway Billboard Sign shall submit a Federal Aviation Form 7460-1 to the local Federal Aviation Administration office for review. A positive recommendation from the Federal Aviation Administration stating the Freeway Billboard Sign has no negative effect on any airport or navigational airspace must be received prior to Design Review approval.

15. The Glendale Municipal Airport Manager and Luke Air Force Base shall be informed of all requests for Freeway Billboard Sign. The Airport Manager and a representative of the Base shall both state that the Freeway Billboard Sign has no impact on facility operations prior to Design Review approval.

16. The minimum setback standard of Section 7.110.A.7 may be reduced by the Zoning Administrator upon a showing by the property owner that strict application of the standard to a specific sign installation will cause a potential hazard to motorist safety due to visibility limitations caused by:

- a. Existing or proposed structures; or
- b. Grade or elevation changes at or near the subject property; or
- c. Proximity to existing or proposed bridges, overpasses or other similar roadway features; or
- d. Curvature or other design feature of the adjacent freeway; or
- e. Strict compliance would not be in the best interests of the City of Glendale and/or the public at large.



January 28, 2011

VIA E-MAIL ONLY

Mr. Nick Wood
Snell & Wilmer, L. L. P.
One Arizona Center
400 East Van Buren Street
Phoenix, AZ 85004
nwood@swlaw.com

RE: Proposed Sign Ordinance Revisions for Billboards in the Commercial Office (C-O)
Zoning District

Dear Mr. Wood:

Thank you for sending the review materials for a suggested amendment to the proposed sign ordinance. Staff has reviewed the suggested amendment and will not be amending the proposed sign ordinance to permit billboards in the Commercial Office District.

Tying the zoning ordinance to a specific representation in a specific General Plan is not good planning practice, given the different methods of approval, authority, and purpose of a General Plan and Zoning Ordinance.

Subsequent to the adoption of Glendale 2025: The Next Step, the city's current general plan, the city has recognized a Sports and Entertainment District as only a limited portion of the Western Area General Plan Update area, with unique characteristics. The city has used the Planned Area Development zoning category to implement this vision of a mixed-use destination.

The Western Area General Plan Update was not simultaneously amended at the same time as the Planned Area Development zoning amendments, such as Main Street, Centrada, and Centrada Norte, which were approved in the Sports and Entertainment District.

Reiterating the point made in Jon Froke's letter dated October 28, 2010. The properties granted the Planned Area Development zoning have been done so with the expectation of mixed-use development with a variety of land uses, unlike properties zoned Commercial Office, which is defined in the zoning text amendment as providing for professional and service offices located on arterial streets or adjacent to commercial areas.

The Commercial Office District may be in proximity to other businesses or provide a transition between commercial uses and adjacent residential development. The intent of the Commercial Office District is to accommodate office development at an intermediate scale with strict performance controls.

Please contact me if you have any additional questions.

Sincerely,



Thomas Ritz, AICP
Senior Planner
Planning Department

cc: Deborah Mazoyer, Assistant Deputy City Manager
Jon M. Froke, Planning Director



October 28, 2010

Mr. Nick Wood
Snell & Wilmer, L.L.P.
One Arizona Center
400 East Van Buren Street
Phoenix, AZ 85004

RE: Loop 101 Corridor | Glendale, Arizona

Dear Mr. Wood:

This is in response to our meeting two weeks ago regarding potential signage opportunities on the Loop 101 Corridor.

As you are aware with your recent entitlement work on mixed use projects, the City of Glendale is seeking to apply fair and consistent sign packages for properties on both sides of the Loop 101 within the Sports & Entertainment District.

The draft Zoning Ordinance Update requires PAD, Planned Area Development, zoning in order to effectuate additional signage. The Glendale Corporate Center is zoned C-O, Commercial Office. As such, this site is not a feasible candidate for additional signage. New signage opportunities on this site appear to be limited without rezoning the site to PAD.

Please contact me at (623) 930-2585 if you have any questions regarding this matter.

Sincerely,

A handwritten signature in dark ink, appearing to read "Jon M. Froke".

Jon M. Froke, AICP
Planning Director
Planning Department

JMF:df

cc: James Mago, Economic Development Administrator

7.104 Permitted Permanent Signs.

Permitted signs shall conform to the definitions in Section 2.300 and the specific provisions for each zoning district.

(TABLE ON PAGE 161)

Sign Types	Agricultural and Residence Districts	Office Districts	Commercial and Industrial Districts (except PR)*
A. Address sign	P	P	P
B. Awning sign	N	P	P
C. Billboards	N	N**	S
D. Building mounted sign	P	P	P
E. Commercial or farm ranch signs	P	N	N
F. Directional sign	P	P	P
G. Directory sign	N	P	P
H. Flags and flagpoles	P	P	P
I. Freestanding identification sign	P	P	P
J. Freeway Pylon Signs	N	N	S
K. Menu board sign	N	P	P
L. Reader panel sign	P	P	P
M. Service station sign	N	P	P
N. Temporary signs (see Section 7.106)	P	P	P
O. Window sign	N	P	P

P = Permitted

N = Not permitted

S = Permitted Subject to Limitations

*Note: Please refer to Section 7.105 for all regulations for signs in the Pedestrian Retail (PR) zoning district.

**Note: Exception for the CO Office District if located within the "Western Area General Plan Update area; see Section 7.104.C

7.104 Permitted Permanent Signs.

C. Billboards. Billboards are permitted in certain zoning districts subject to the regulations noted below.

1. Loop 101 Corridor. Billboards in this corridor are subject to the following regulations:

- a. The zoning of the property on which the billboard is located must be Planned Area Development (PAD) or Commercial Office (CO) and be located within the boundaries of the "Western Area General Plan Update" area (as identified on the City of Glendale General Plan Land Use Map).
- b. Any PAD in existence before the effective date of this ordinance (INSERT DATE) will require Design Review approval pursuant to Section 3.600 to allow a billboard within the PAD.
- c. Any lot with at least ~~one thousand (1,000)~~ six hundred (600) feet of lineal frontage directly adjacent to the Loop 101 freeway right-of-way may have ~~additional advertising~~ a billboard on the property.
- d. One billboard is allowed for every six hundred ~~sixty~~ (6600) lineal feet of freeway frontage.
- e. The billboard must be located within three hundred thirty (330) feet of freeway right-of-way.
- f. Maximum height, including any supporting structures, must be no more than sixty-five (65) feet.
- g. Maximum width must be no more than fifty (50) feet.
- h. Maximum sign area must not exceed six hundred seventy five (675) square feet.
- i. Any outdoor advertising sign on-site or within two hundred feet of the property advertised shall be included in the maximum wall mounted sign area for that property if the outdoor advertising sign exclusively advertises that property. This provision shall not apply to an outdoor advertising sign which relates to multiple properties or businesses including that property.
- j. There shall be a minimum distance of ~~one eighth (1/8) mile or~~ six hundred ~~sixty~~ feet (6600) between ~~all~~ any billboards located upon any property. This distance shall be measured from the center of the supporting column(s).
- k. ~~All billboards must be setback a minimum of three hundred thirty (330) feet from the property line at any property corner.~~
- l. Any PAD in existence before the effective date of this ordinance that contains provisions for billboards shall not be subject to the requirements of this section.
- m. The City of Glendale has the sole right to limit the total number of billboards based on market conditions, appearance and public interest.



PHONE: 602-230-0600

FAX: 602-212-1787

2525 E. Arizona Biltmore Circle, Suite A-212, Phoenix, AZ 85016

MEMORANDUM

To: Jon Froke
City of Glendale Planning Director

Date: September 30, 2010

Re: Proposed Ordinance text for the City Sign Code

Pursuant to your request, this correspondence is intended to provide proposed language in relation to the revisions to the City's sign code.

Electronic Readers

Section 7.104 (L)

L. Reader panel signs. Reader panel sign requirements are as follows:

4. All other commercial uses may use up to one-half (1/2) of the allowed freestanding sign area for a reader panel, subject to the following condition or limitations:

a. A Use Permit shall be obtained

OR

a. Approval from the Zoning Administrator shall be obtained

Monument Signs

Section 7.104 (I) 4

4. Sign area and height for commercial and manufacturing districts:

- b. The maximum sign area for multi-tenant shopping centers of parcels up to twenty (20) acres is ~~eighty (80)~~ one hundred ten (110) square feet and ~~one hundred ten (110)~~ one hundred forty (140) square feet for parcels over twenty (20) acres.
- c. Single tenant buildings: the sign may include only the name of the business, industry, service or building it is intended to identify. ~~Such sign shall not include any advertising copy.~~
- d. Multi-tenant buildings and complexes: the sign may identify the name of the building or complex and the name of up to ~~ten (10)~~ businesses within the building or complex. ~~Such sign shall not include any advertising copy.~~

Sign Text

Section 7.102 (F) 4

4. A Sign may identify the primary businesses, building complex, industry, service or center, by name. The sign may show the name of the primary business and up to three (3) principle services. ~~when the name alone does not identify the general nature of the primary business, unless specified otherwise. A sign must not include advertising copy.~~

We appreciate your time in meeting with us to discuss these proposals. Please do not hesitate to call me at 602-230-0600 with any comments, concerns or questions. Thank you for your courtesy and consideration. We look forward to presenting these proposed revisions to the Planning Commission but hope that staff will find these to be reasonable and acceptable revisions to include within their draft ordinance.

Sincerely,

WITHEY MORRIS P.L.C.

By 

Michelle Santoro



TIFFANY
& BOSCO
P.A.

Jon M. Paladini
Attorney at Law
602-255-6040
jmp@tblaw.com

August 18, 2010

VIA ELECTRONIC MAIL ONLY

Mr. Jon Froke
Planning Director
City of Glendale
5850 West Glendale Avenue
Glendale, Arizona 85301
jfroke@glendaleaz.com

RE: *Becker Boards, LLC - Proposed Amendments to Glendale Zoning Ordinance (Billboards)*

Dear Jon:

As a follow up to our recent discussion regarding the City's proposed revisions to the Zoning Ordinance, on behalf of our client Becker Boards, LLC, we are submitting the following proposed text revisions for inclusion in the staff recommended revisions to the Zoning Ordinance.

We believe that the attached proposed revisions are a fair and equitable way to allow for billboards on a limited scale on certain properties in the SR 101 corridor without the need to create an "artificial" or "empty" PAD zoning district on the property.

As you will see, we propose deleting Paragraph "m" from the amendment. Given that the City is itself a current as well as potential lessor or licensor to billboard companies, the unfettered discretion that Paragraph "m" would give to the City would likely cause unintended legal and political consequences should a proposed sign be denied without any rational basis, or application of articulated standards. On the other hand, because our proposed revisions would require an approved Conditional Use Permit for non-PAD zoning districts, they allow for some discretion on the part of the City by including the CUP standards as a measurement, and permit the City to impose additional reasonable conditions and stipulations on the development of a billboard.

Finally, because the geographical region where this section would apply is limited, the proposed revisions will not allow for an excess of outdoor signage in the City.

For the foregoing reasons, we ask that staff include these proposed text revisions in the recommended Zoning Ordinance amendment that is presented to the Planning & Zoning Commission and City Council.

We would be happy to discuss any questions or comments you might have. Thank you in advance for your consideration.

www.tblaw.com

Member of MSI Global Alliance, an international association of independent legal & accounting firms

Camelback Esplanade II, Third Floor 602.255.6000 Phone
2525 East Camelback Road 602.255.0103 Fax
Phoenix, Arizona 85016-4237



TIFFANY
& BOSCO
P.A.

Becker Boards, LLC
Proposed Amendments to Glendale Zoning Ordinance
August 18, 2010
Page 2 of 2

Sincerely,

Tiffany & Bosco, P.A.

/s/ Jon M. Paladini

Jon M. Paladini

JMP/ejh

Attachment

cc: Jim Colson, Acting Assistant City Manager, City of Glendale
Mark Becker, Becker Boards
Joseph White, Becker Boards
Ronald N. Rovey

WD/DCJ/16532.001/439226

C. Billboards. Billboards are permitted in certain zoning districts subject to the regulations noted below.

Formatted: Font: Palatino Linotype

1. Loop 101 Corridor. Billboards in this corridor are subject to the following regulations:

- a. The zoning of the property on which the billboard is located must be Planned Area Development (PAD) or in any other non-residential zoning district with an approved Conditional Use Permit pursuant to Section 3.900.
- b. Any PAD in existence before the effective date of this ordinance will require Design Review approval to allow a billboard within the PAD.
- c. Any lot with at least one thousand (1,000) feet of lineal frontage adjacent to the Loop 101 freeway right-of-way may have additional advertising on the property.
- d. One billboard is allowed for every six hundred sixty (660) lineal feet of freeway frontage along each side of the freeway but not measured across the freeway.
- e. The billboard must be located within three hundred thirty (330) feet of freeway right-of-way.
- f. Maximum height including any supporting structures, must be no more than sixty-five (65) feet.
- g. Maximum width must be no more than fifty (50) feet.
- h. Maximum sign area must not exceed six hundred seventy five (675) square feet.
- i. Any outdoor advertising sign on-site or within two hundred feet of the property advertised shall be included in the maximum wall mounted sign area for that property if the outdoor advertising sign exclusively advertises that property. This provision shall not apply to an outdoor advertising sign which relates to multiple properties or businesses including that property.
- j. There shall be a minimum distance of one-eighth (1/8) mile or six hundred sixty feet (660) between all billboards on any single lot or parcel.

Formatted: Font: Palatino Linotype

Deleted: property

Formatted: Font: Palatino Linotype

Formatted: Font: Palatino Linotype

Formatted: Font: Palatino Linotype

- k. All billboards must be setback a minimum of three hundred thirty (330) feet from the property line at any property corner not separated by a public right-of-way.

Deleted: nay

Formatted: Font: Palatino Linotype

Formatted: Font: Palatino Linotype

- l. Any PAD in existence before the effective date of this ordinance that contains provisions for billboards shall not be subject to the requirements of this section.

Deleted: m. The City of Glendale has the sole right to limit the total number of billboards based on market conditions, appearance and public interest.¶

Deleted: 202

Formatted: Font: Palatino Linotype

2. Loop 303 Corridor. The following regulations are applicable to the Loop 303 Corridor.

- a. The zoning of the property on which the billboard is located must be Planned Area Development (PAD) or in any other non-residential zoning district with an approved Conditional Use Permit pursuant to Section 3.900.

Formatted: Font: Palatino Linotype

- b. Any PAD in existence before the effective date of this ordinance will require Design Review approval to allow a billboard within the PAD.

- c. Any lot with at least one thousand (1,000) feet of lineal frontage adjacent to the Loop 101 freeway right-of-way may have additional advertising on the property.

- d. One billboard is allowed for every six hundred sixty (660) lineal feet of freeway frontage along each side of the freeway but not measured across the freeway.

Formatted: Font: Palatino Linotype

- e. The billboard must be located within three hundred thirty (330) feet of freeway right-of-way.

- f. Maximum height including any supporting structures, must be no more than sixty-five (65) feet.

- g. Maximum width must be no more than fifty (50) feet.

- h. Maximum sign area must not exceed six hundred seventy five (675) square feet.

- i. Any outdoor advertising sign on-site or within two hundred feet of the property advertised shall be included in the maximum wall mounted sign area for that property if the outdoor advertising sign exclusively

advertises that property. This provision shall not apply to an outdoor advertising sign which relates to multiple properties or businesses including that property.

- j. There shall be a minimum distance of one-eighth (1/8) mile or six hundred sixty feet (660) between all billboards on any single lot or parcel.
- k. All billboards must be setback a minimum of three hundred thirty (330) feet from the property line at any property corner not separated by a public right-of-way.
- l. Any PAD in existence before the effective date of this ordinance that contains provisions for billboards shall not be subject to the requirements of this section.

Formatted: Font: Palatino Linotype

Deleted: property

Formatted: Font: Palatino Linotype

Deleted: way

Formatted: Font: Palatino Linotype

Formatted: Font: Palatino Linotype

Deleted: m. The City of Glendale has the sole right to limit the total number of billboards based on market conditions, appearance and public interest.

Formatted: Centered

PROPOSED ADDITIONAL REVISIONS TO SECTION 3.900

INSERT NEW PARAGRAPH Section 3.902(G)

- G. Billboard applications require the following additional information:
- 1. A map showing any existing or approved single-family residential developments within one-half (1/2) mile of the proposed billboard.
 - 2. A map showing all billboards which are existing, approved, or under construction within a one (1) mile radius of the site.
 - 3. Photos of the site showing all public views and views from residential property within a one (1) mile radius of the site.
 - 4. A scaled elevation of the billboard from each direction. The elevation must be legible when reduced to eight (8) and one-half (1/2) by eleven (11) inch size.

Formatted: Font: Palatino Linotype

C. Billboards. Billboards are permitted in certain zoning districts subject to the regulations noted below.

Formatted: Font: Palatino Linotype

1. Loop 101 Corridor. Billboards in this corridor are subject to the following regulations:

- a. The zoning of the property on which the billboard is located must be Planned Area Development (PAD) or in any other non-residential zoning district with an approved Conditional Use Permit pursuant to Section 3.900.
- b. Any PAD in existence before the effective date of this ordinance will require Design Review approval to allow a billboard within the PAD.
- c. Any lot with at least one thousand (1,000) feet of lineal frontage adjacent to the Loop 101 freeway right-of-way may have additional advertising on the property.
- d. One billboard is allowed for every six hundred sixty (660) lineal feet of freeway frontage along each side of the freeway but not measured across the freeway.
- e. The billboard must be located within three hundred thirty (330) feet of freeway right-of-way.
- f. Maximum height including any supporting structures, must be no more than sixty-five (65) feet.
- g. Maximum width must be no more than fifty (50) feet.
- h. Maximum sign area must not exceed six hundred seventy five (675) square feet.
- i. Any outdoor advertising sign on-site or within two hundred feet of the property advertised shall be included in the maximum wall mounted sign area for that property if the outdoor advertising sign exclusively advertises that property. This provision shall not apply to an outdoor advertising sign which relates to multiple properties or businesses including that property.

Formatted: Font: Palatino Linotype

j. There shall be a minimum distance of one-eighth (1/8) mile or six hundred sixty feet (660) between all billboards on any single property lot or parcel.

Formatted: Font: Palatino Linotype

Formatted: Font: Palatino Linotype

Formatted: Font: Palatino Linotype

k. All billboards must be setback a minimum of three hundred thirty (330) feet from the property line at ~~any~~ any property corner not separated by a public right-of-way.

Formatted: Font: Palatino Linotype

Formatted: Font: Palatino Linotype

l. Any PAD in existence before the effective date of this ordinance that contains provisions for billboards shall not be subject to the requirements of this section.

~~m. The City of Glendale has the sole right to limit the total number of billboards based on market conditions, appearance and public interest.~~

2. Loop 202-303 Corridor. The following regulations are applicable to the Loop 303 Corridor.

Formatted: Font: Palatino Linotype

a. The zoning of the property on which the billboard is located must be Planned Area Development (PAD) or in any other non-residential zoning district with an approved Conditional Use Permit pursuant to Section 3.900.

Formatted: Font: Palatino Linotype

b. Any PAD in existence before the effective date of this ordinance will require Design Review approval to allow a billboard within the PAD.

c. Any lot with at least one thousand (1,000) feet of lineal frontage adjacent to the Loop 101 freeway right-of-way may have additional advertising on the property.

d. One billboard is allowed for every six hundred sixty (660) lineal feet of freeway frontage along each side of the freeway but not measured across the freeway.

Formatted: Font: Palatino Linotype

e. The billboard must be located within three hundred thirty (330) feet of freeway right-of-way.

f. Maximum height including any supporting structures, must be no more than sixty-five (65) feet.

g. Maximum width must be no more than fifty (50) feet.

- h. Maximum sign area must not exceed six hundred seventy five (675) square feet.
- i. Any outdoor advertising sign on-site or within two hundred feet of the property advertised shall be included in the maximum wall mounted sign area for that property if the outdoor advertising sign exclusively advertises that property. This provision shall not apply to an outdoor advertising sign which relates to multiple properties or businesses including that property.
- j. There shall be a minimum distance of one-eighth (1/8) mile or six hundred sixty fee (660) between all billboards on any property, single lot or parcel.
- k. All billboards must be setback a minimum of three hundred thirty (330) feet from the property line at any any property corner not separated by a public right-of-way.
- l. Any PAD in existence before the effective date of this ordinance that contains provisions for billboards shall not be subject to the requirements of this section.
- m. ~~The City of Clendale has the sole right to limit the total number of billboards based on market conditions, appearance and public interest.~~

Formatted: Font: Palatino Linotype

Formatted: Font: Palatino Linotype

Formatted: Font: Palatino Linotype

Formatted: Font: Palatino Linotype

PROPOSED ADDITIONAL REVISIONS TO SECTION 3.900

Formatted: Centered

INSERT NEW PARAGRAPH Section 3.902(G)

- G. Billboard applications require the following additional information:
 - 1. A map showing any existing or approved single-family residential developments within one-half (1/2) mile of the proposed billboard.
 - 2. A map showing all billboards which are existing, approved, or under construction within a one (1) mile radius of the site.

3. Photos of the site showing all public views and views from residential property within a one (1) mile radius of the site.
4. A scaled elevation of the billboard from each direction. The elevation must be legible when reduced to eight (8) and one-half (1/2) by eleven (11) inch size.

Formatted: Font: Palatino Linotype

ROVEY FARMS

1785 W. State Route 89A, Suite 3-I
Sedona, AZ 86336
(928) 282-1155

July 26, 2010

Mr. Jon Froke, AICP
Planning Director
City of Glendale Planning Department
5850 West Glendale Avenue, Suite 212
Glendale, AZ 85301

Re: Loop 101 Freeway Signs

Dear Mr. Froke:

As we have discussed in our recent phone conversations, the provision in the proposed amendments to the Zoning Ordinance under Article 7, Section 7.104(C)(2)(a) that requires PAD zoning for signs along the Loop 101 Freeway is overly stringent and essentially excludes most all of the frontage property along the 101 within the Glendale City limits from having signs until some unknown time in the future when that land is ultimately developed.

As you know, for many years our Rovey Family has owned and farmed the land along the west side of the 101 from Glendale to Maryland (one-half mile of 101 frontage). In fact, Mayor Scruggs asked our family to voluntarily annex that original 80 acre farm before the 101 freeway was built in order for the City to have more control over the freeway development and to collect sales taxes from the freeway construction. We agreed to that annexation to assist, cooperate with and benefit the City.

Given the current state of the economy with no development occurring, we will most likely continue to farm the remainder of that property for perhaps another five, ten or maybe even fifteen or more years in the future. Until that property is ready for development, we have no way of knowing what kind of planning or development would even remotely be appropriate. Moreover, the fees and costs to plan and zone that entire tract would be quite substantial and most likely end up being wasted efforts with our having to start over when the land is actually developed. It is nearly impossible at this point in time to perceive and guess what the land will actually be used for just to plan and zone that 34 acre tract only to be able to have any freeway frontage signs similar to what the City has on its Park & Ride facility that is adjacent to our land.

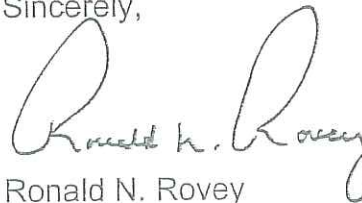
Historically, outdoor advertising signs have been allowed along major highways and freeways on open and undeveloped adjoining land, very often farm and ranch land. For years our family leased several sites for outdoor advertising signs on our farm land adjacent to Grand Avenue in Glendale. There is really no significant connection between PAD zoning and 101 Freeway signs or truly impelling reasons or basis to require premature PAD zoning years before actual development occurs only to allow signs on the 101 Freeway. A very reasonable solution would be to add to Section 7.104(C)(2)(a) "or a Special Use Permit". That would allow the City an ample review process, discretion and control to appropriately regulate frontage signs along the short three mile 101 freeway corridor within the City limits. Also, with the frontage distance requirements, there can only be a fairly limited number of signs along the City's stretch of the freeway.

Restricting freeway signs only to existing PAD zoning, effectively excludes having freeway signs on most of the land, except for the one or two parcels that are already developed. The City conveniently established PAD zoning on its already existing Park & Ride facility to accommodate the two freeway signs that are on that property. To now restrict signs to only PAD zoning, effectively excludes any other signs on the City's section of the 101, which creates a monopoly for the existing signs until the economy improves and development returns some time in the future.

Our grandparents came to Arizona in 1912 to farm in northwest Phoenix. Our parents farmed in Glendale since 1942, and our present family still farms there today. Until the family's land is ultimately developed, we will continue to farm it in the future. There is no reason that our family should have to wait for perhaps years in the future until it becomes practical and realistic to obtain PAD zoning for actual commercial development of that land in order to then have any signs on the 101.

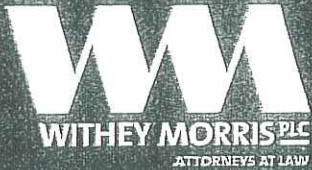
We respectfully request that "Special Use Permit" language and/or other fair and reasonable solutions be added to the proposed amendments to the Zoning Ordinance.

Sincerely,

A handwritten signature in black ink, appearing to read "Ronald N. Rovey". The signature is fluid and cursive, with the first and last names being more prominent.

Ronald N. Rovey

RNR:me



PHONE: 602-230-0600

FAX: 602-212-1787

2525 E. Arizona Biltmore Circle, Suite A-212, Phoenix, AZ 85016

MEMORANDUM

To: Maryann Pickering
City of Glendale Zoning Administrator

Date: July 1, 2010

Re: Draft revisions to City Sign Code

Pursuant to your request, this correspondence is intended to provide comments and/or suggestions in relation to the draft revisions to the City's sign code.

1. Electronic Readers

Currently, many other municipalities are permitting electronic readers. It is suggested that the City allow electronic readers in applications other than those uses listed in Section 7.104 (L). These types of signs have come so far technologically and are of much better quality in recent years. To ensure quality standards, it is suggested that an Administrative Review be required for such type of sign.

2. Monument Signs

It is suggested that a larger monument sign in general be allowed. Section 7.104 (I). This is especially important for small businesses within larger in-line shops. The impact of such signage on these small businesses is tremendous. If quality standards are a concern, it is suggested that an Administrative Review be required to enlarge a monument sign.

3. Promotional banners, streamers, inflatable air dancers, etc

Promotional banners, streamers, etc. are limited to three (3) times per year per Sections 7.106 (A) & (G). It is suggested that such type of displays be allowed four (4) times per year – one per quarter.

4. Sign text

It is suggested that industry trade names not be restricted from signage. Currently only the business name is allowed on the sign per Section 7.102(F).

We appreciate your time in meeting with us to discuss these proposals. Please do not hesitate to call me at 602-230-0600 with any comments, concerns or questions. Thank you for your courtesy and consideration. We look forward to presenting these proposed revisions to the Planning Commission but hope that staff will find these to be reasonable and acceptable revisions to include within their draft ordinance.

Sincerely,

WITHEY MORRIS P.L.C.

By *Michelle Santoro*

Michelle Santoro

EARL, CURLEY & LAGARDE, P.C.
ATTORNEYS AT LAW

Telephone (602) 265-0094
Fax (602) 265-2195

3101 North Central Avenue
Suite 1000
Phoenix, Arizona 85012

June 8, 2010

Mr. Jon Froke
Planning Director
City of Glendale
5801 W. Glendale Avenue
Glendale, AZ 85301

Delivered via e-mail

RE: Signage Comments in draft Glendale Zoning Ordinance

Dear Jon:

We want to thank you and Maryann for meeting with us on May 18th and listening to our comments on the signage language contained in the draft Zoning Ordinance. As you suggested we are documenting our comments in this letter for your review. Although you have asked for public comments by May 21st, you indicated that a defined schedule to adopt this Ordinance is not in place and that you would be willing to meet with us again after you review these comments.

This subject is very timely as there are two projects directly impacted by this Ordinance. As you know a Stipulation had to be added to the Urban 95 PAD to allow the future adopted Ordinance to govern. In an identical manner the Bella Villagio PAD contains signage that far exceeds the City's existing and proposed standards for billboards and freeway signs and we believe the Bella Villagio signage should also be made to conform to the adopted Ordinance.

As we noted in our meeting, our client's initial and current goal was to preserve the section of the L101 corridor (now termed Southern Freeway corridor) for the West Valley's and Glendale's preeminent employment center. This would typically allow very few billboards. However, as billboards have now been installed in this corridor and more are planned, we want to ensure that the Ordinance signage language is clear and fair. That is the basis for the following comments that relate to Sections 7.104.C (Billboards) and 7.104.J (Freeway Pylons).

- 7.104.C & 7.104.J: The issue of setbacks from property corners is not addressed. A sign located in a property corner has a negative impact on the adjacent owner. It would seem that a 330' minimum setback from a property corner should be part of the Ordinance.
- 7.104.C.2.a: Although PAD zoning is needed for a billboard, we learned that an existing PAD that did NOT include billboards will require a Major Amendment to obtain approval for billboards. We suggest that this be made clear.

June 9, 2010

Page 2

- 7.104.C.2.b.c.i: These three clauses appear to conflict with one another as it is unclear as to the allocation of billboards on any one property. We believe that the intent of the Ordinance is to require 1,000' of continuous freeway frontage before 1 billboard or 1 pylon is permitted. As 7.104.C.2.i clearly mentions multiple billboards and some properties already have more than 1 billboard, we believe that limiting billboards to 1 per property regardless of freeway frontage is unfair. We believe that allocating billboards on 1 per 1,000 feet of frontage is an acceptable and fair allocation method. In this method a freeway pylon would count as 1 "billboard". Note that the previous comments apply to Sections 7.104.J.2.a,b.

Finally, we believe that another bullet point/provision should be added that states existing signage provisions contained in an approved PAD will NOT be affected by this new Ordinance?

Thank you again for the opportunity to provide these comments and we are available to review any subsequent revisions.

Sincerely,



Mike Curley

cc: Tim Bidwill
Mike Rushman

PUBLIC COMMENTS ON WEB



Prepared for
Planning Department
Zoning 1, 3, 4, 5

Received 4/27/09

From: Courtney LeVinus [courtney@capitolconsultingaz.com]
Sent: Monday, March 16, 2009 8:58 PM
To: 'Courtney LeVinus'; suzanne@capitolconsultingaz.com; Pickering, Maryann
Subject: Zoning Ordinance Update

Dear Maryann,

Thanks for sending the proposed changes. How do you want to handle responses to the first three articles? As I recall from our meeting there we are no a very short time frame.

Two quick questions

- (1) At initial glance it appears that there is a two year retrofit provision for signage, fencing and outside storage (1.402 section E), is this an accurate interpretation?
- (2) It also appears in 3.302 section A that there is no longer a City notice requirement to the property owner if the application is not complete. Is this accurate and how will the applicant be notified if the application is not complete and additional information is needed?

Thanks,

Courtney LeVinus

From: Pickering, Maryann [mailto:MPickering@GLENDALEAZ.com]

Sent: Thursday, March 12, 2009 10:29 AM

To: Bailey, Roger; Baxley, Kendall ; Benna, Rebecca; Black, Debora; Blazina, Jessica; Broyles, Larry; Burdick, Mark; Cannataro, George; Carmide, Alma; Cleveland, Stephen; Conrad, Steven; Davis, Chester; Dever, Lorie ; Dudley, Stephen; Duerr, Debra; Emery, Garnet; Erno, Stephen; Flinn, Elizabeth; Friedman, Brian; Frisoni, Julie; Goins, Josh; Handlong, Amy; Hanna, Pam; Hernandez, Paul; Hurd, Chumita; Johnson, Genevieve; Kavanaugh, Pam; Kent, Stuart; Komernicky, Sue; Krey, Kristen; Kukino, Doug; Lamb, Robert; LeVinus, Courtney; Lynch, Art; Lyons, Alisa; MacLeod, Candace; Mazoyer, Deborah; McAllen, Samuel; Mehta, Jamsheed; Methvin, Steven; Moreno, Jean; Murphy, Chuck; Nelson, Mark; Clark, Marilyn; Cordero, Remigio; Eastman, Jessica; Figueroa, Diana; Flores, Karen; Froke, Jon; Hunt, Lisa; Kulikowski, Peter; Luttrell, Bill; May, James; O'Neil, Erin; Perry, Tabitha; Ritz, Thomas; Shabbeer, Shaik; Short, Ronald; Stovall, Karen; Reed, Karen A.; Reedy, Ken; Ricard, Suzle; Santiago-Esplno, Gloria; Schurhammer, Sherry; Schwind, William; Skeete, Horatio; Strunk, Erik; Tice, Andrew; Tindall, Craig; Toporek, Sam ; VanDeman, Brent
Subject: Zoning Ordinance Update

Hello!

As you know, the Planning Department is in the process of a comprehensive update to the zoning ordinance. The first portion is now available for review and comment on our website. The first portion is Articles 1 and 3. Please note that we will be revising Article 2

(Definitions) at the end of the process and that is the reason it is not included at this time.

The link to our website is: <http://www.glendaleaz.com/planning/>

You will see the update as the first item on the page with a pdf link to the proposed changes. We welcome your feedback and comments. All comments can be directed to my attention.

You will receive future emails as more portions are available for review. Thank you in advance for your assistance with this endeavor.

Maryann Pickering, AICP

Zoning Administrator

City of Glendale

(623) 930-2590 - phone

(623) 915-2695 - fax



Please consider the environment
before printing this message.

This email and files transmitted within are intended solely for the use of the individual or entity to whom they are addressed, if you have received this email in error please delete it and notify the sender of the message. Any views expressed in this message are those of the individual sender, except where the sender specifies them to be the views of the City of Glendale Arizona.
Message scanning was performed by Websense e-mail security software and virus detection software.



Capitol Consulting, LLC

May 13, 2009

Ms. Maryann Pickering, AICP
Zoning Administrator
City of Glendale
5850 W Glendale Ave., Suite 212
Glendale, AZ 85301

Re: Zoning Code

Dear Maryann,

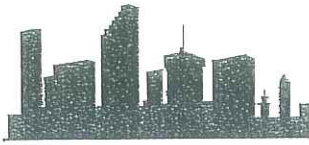
Per your request below are the recommendations from the Arizona Multihousing Association for changes to the sign code portion of the zoning code.

- 7.106 H – Sale, Lease or Rent Signs for all land uses - *On parcels of less than five-acre signs are limited to one per street frontage with a maximum height of 5 feet and a maximum area of 6 square feet. On parcels of more than five-acre, signs are limited to one per street frontage with a maximum height of 8 feet and a maximum area of 32 square feet.* This will make the Glendale sign code equitable among land uses and more competitive with surrounding cities that have similar provisions for all land uses (Avondale and Goodyear).
- 7.106 I – Special Events for all land uses – *such signs shall have a maximum area of 32 square feet and a maximum height of 8 feet.* Again this makes the sign code equitable among land uses and more competitive with surrounding cities.
- 7.106 G 4 – Promotional Displays – *such displays shall be allowed for thirty (30) days no more than four (4) times per calendar year.* As well as a temporary recession amendment similar to Peoria which allows - *such displays shall be allowed for sixty (90) days no more than two (2) times per year and sixty (60) days between permitting until July 31, 2011.*
- 7-106 J - Subdivision Advertising and Directional Signage. Include multiple residence uses in these provisions to provide equity among land uses for provisions 1, 2 and 3 (general, on-site advertising and identification flags). This is similar to Goodyear grand opening provisions for multiple residence uses (R5) which is allowed for one year from initial Certificate of Occupancy or until the rental community is 95% occupied whichever comes first.

Maryann, we appreciate your consideration of these recommendations. During these difficult economic times our apartment communities are dealing with record high vacancy rates, reduced rents and unbelievable economic concessions for new and renewing residents. Drive-by advertising (on-site signage) accounts for over 85% of our residents and is the most effective and least expensive form of advertising for our industry. We understand the desire to keep Glendale "clutter free" from too much signage and will be happy to work with you to provide flexibility to our owners while at the same time maintain the Glendale image.

Regards,

Courtney LeVinus
Capitol Consulting
Representing Arizona Multihousing Association



James Carpentier AICP
Legislative Consultant

May 18, 2009

To: Maryann Pickering AICP, Zoning Administrator, City of Glendale

Re: Proposed revisions to the Glendale Sign Code

We appreciate the opportunity to provide the City of Glendale with comments in regards to the proposed sign code draft. In addition, we are thankful that you have granted some additional time to allow the Arizona Sign Association to review the proposed code.

The proposed Glendale sign code has a number of issues that the Arizona Sign Association would like to see addressed. One of the key issues noted below is the regulation of sign content well beyond the three prong test of, "time, place, and manner." The following is a summary of the key issues of concern to the Arizona Sign Association:

- The Arizona Sign Association is proposing, as a part of a master sign plan, if a project designates 100% of all sign illumination (ground and wall) as LED the project will qualify for a 25% bonus in sign height or area. This proposal is in compliance with and supports Glendale's General Plan, Implementation Program, Conservation of Resources Policies, #6. Green Building Practices. This proposal is warranted due to the additional costs for LED illumination is offset by the bonus in area or height.
- The draft is proposing to decrease the height in the Office Districts from 15' to 8'. The model code by the Signage Foundation (a copy was sent with this email) suggests a minimum of 12' in any district for functionality and view ability. The ASA recommends that the minimum height of 12' be maintained for visibility and functionality, as this matches the height in the Industrial and Commercial Districts.
- The City is recommending electronic message displays (LED signs) for churches, schools and theaters. We are suggesting that the City allow electronic message displays for Industrial and Commercial districts. The Arizona sign Association is recommending that the square foot for electronic message centers not exceed 50% of the allowable square footage. In addition, we are recommending automatic dimming requirements and illumination standards for all electronic message displays. This will assure the City that electronic message displays regardless of the District will not be too bright especially at night, in any given location.
- The draft code has regulations for school signs which are contrary to the General Attorney Office ruling, of which a copy is attached.
- The draft code has extensive regulation of the sign content for permanent and temporary signs. The City should predominately regulate the time,

place, and manner of signs not the content of the sign. As recommended in the Signage Foundation Model Code a major guiding principle when drafting a sign code is to be "content-neutral to the greatest degree practicable so as to avoid favoring some types of signs – or sign users – over others. This means that sign regulations will not be based upon a sign's message. Instead, the regulations will be based upon the sign's function and its placement on the building or site." The draft sign code is heavily based on content regulation: political, directory, map directory, going out of business and other specific limitations on sign content. The Arizona Sign Association strongly recommends that the City consider going towards a content neutral sign code, which would predominately regulate signs based on the general nature such as temporary and permanent versus the sign type. Note the attached model code by the Signage Foundation, which includes a good legal discussion in regards to sign content considerations. Also see the attached link to the Small Business Association, which discusses this issue.

<http://www.sba.gov/smallbusinessplanner/start/pickalocation/signage/amendments.html>

If you have any questions or need additional information please feel free to contact me.

Thanks

James B Carpentier AICP
Legislative Consultant
480-773-3756
consultantcommunityplanning@gmail.com

Arizona Sign Association recommendations for the proposed
Glendale sign code amendments

Recommended deletions are in ~~strike out red~~. Recommended
changes to the code are underline red, and the Arizona Sign
Association comments are in *italics bold*.

6.710 Signs.

Sign standards must be established in the approval of the development plan. A master sign package shall be included as part of the PAD booklet. A master sign package provides design compatibility for all signs and integrates sign design with the architecture of the buildings. The master sign package shall set forth design standards including, but not limited to sign types, placement, size, design, colors, materials, textures, and method of illumination.

Submittal guidelines are recommended for the master sign package so the City can have consistent information for review and approval

7.102 General Provisions. A.

The regulations, requirements, and provisions set forth in this section shall apply to all signs erected, placed, or constructed within the city. A. All signs shall comply with the unobstructed view easement requirements of the City of Glendale, Engineering Design Guidelines for Site Development and Infrastructure Construction as stated in Section (insert section #) of the Engineering Design Guidelines.

The City should cite the section of the view easement and include as visual copy.

7.102 General Provisions F.2.

The maximum total area for the above signs on the premises for any one (1) business may be a maximum of forty (40) square feet plus one (1) square foot of sign area for every lineal foot of business frontage beyond forty (40) lineal feet, as measured by the business frontage. This method of sign area measurement does not apply to large retail users or major medical centers.

The section appears to be out of place as reference is made to above signs, but the application of this section is not clear. If the business frontage is the lot width this method of sign area determination can be difficult from an equity stand point since the wide lots would obtain more signage then narrow lots and these could both have the same lot area.

7.102 General Provisions F. 4.

Such sign may identify the primary businesses, building complex, or center, by name. The sign may show the name of the primary business and up to three (3) principal services when the name alone does not identify the general nature of the primary business, unless specified otherwise. Such sign shall not include advertising copy.

The City should regulate the time place and manner not content of the sign area. Note the attached model code by the Signage Foundation, which includes a good legal discussion in regards to sign content regulations. Also see the attached link to the Small Business Association, which discusses this issue. The sign code is heavily based on content regulation: political, directory, map directory, going out of business. We strongly recommend that the City consider going towards a predominately content neutral sign code.

<http://www.sba.gov/smallbusinessplanner/start/pickalocation/signage/amendments.html>

7.102 General Provisions

Include the definition in this section for calculation method for individual letters. It is very beneficial that the graphic is included in this section. The of area calculation method is fair since the multiple geometric shapes allows for the area measurement to accurately reflect the letter area with minimal "dead space".

7.102 General Provisions

1. Master sign package.

When a site is developed with two or more buildings, a master sign package shall be provided for the property, and approved through administrative design review. 2. For tenants of a complex or center, sign permits will only be issued for signs that comply with the previously approved master sign package. A master sign package provides design compatibility for all signs and integrates sign design with the architecture of the buildings. The Comprehensive Sign Program shall set forth design standards including, but not limited to sign types, placement, size, design, colors, materials, textures, and method of illumination. Amendments to the master sign package shall be approved administratively.

- a. Projects that utilize 100% LED illumination in all ground and wall signs shall qualify for a bonus of 25% in area or height. The bonus may be proportioned to area or height. An exception to the 100% LED illumination is allowed for ground or wall signs that will not be sufficiently illuminated with LED

The Master sign package should have some basic language as to the information required for submittal. The administrative process is not clear, we recommend

that Master sign packages be approved and amended administratively. In addition we are recommending that LED illumination be encouraged through incentives, since additional costs are incurred with LED systems.

7.102 General Provisions G.

Signs may be illuminated internally or externally or as specified by the applicable sign criteria: 1. Sign faces or lettering shall function as a filter for an internally illuminated sign internal illumination is the recommended method of illumination. 2. Sign illumination from above shall be fully shielded. Sign illumination from below Up lighting is generally not allowed unless administratively approved. When approved up lighting shall comply with all applicable city ordinances. 3. Illuminated signs shall require a sign permit and comply with the provisions of applicable electrical codes.

Internal illumination for ground and wall signs is proven to be more effective for visibility than externally illuminated signs. Up lighting for ground signs are not recommended due to ineffective visibility.

7.104 Permitted Permanent Signs.

~~6. d. Such signs may identify the individual businesses, building complex, or center by name. The sign may show the name of the business and up to five (5) principal services when the name alone does not identify the general nature of the business. Such signage shall not include advertising copy.~~

~~6. e. These signs may identify the name of the major medical center and up to three (3) principal departments, businesses, offices, or services in the major medical center. Such sign shall not include any advertising copy.~~

The City should regulate the time place and manner not content of the sign area. Note the attached model code by the Signage Foundation, which includes a good legal discussion in regards to sign content regulations.

7.104 Permitted Permanent Signs. C. 7.

~~These signs may identify the name of the major medical center and up to three (3) principal departments, businesses, offices, or services in the major medical center. Such sign shall not include any advertising copy.~~

The City should regulate the time place and manner not content of the sign area. Note the attached model code by the Signage Foundation, which includes a good legal discussion in regards to sign content regulations.

7.104 Permitted Permanent Signs. E.

Directional sign. Directional sign requirements are as follows: 1. May be a maximum of six (6) square feet in area and up to three (3) feet in height. 2. ~~Such signs may include identification wording or symbols not to exceed twenty-five percent (25%) for the sign area.~~ 3. ~~Shall not include advertising copy, except for the logo of a business.~~

The City should regulate the time place and manner not content of the sign area. Note the attached model code by the Signage Foundation, which includes a good legal discussion in regards to sign content regulations.

7.104 Permitted Permanent Signs. F.

Directory sign. Directory sign requirements for all users except major medical centers and service stations are contained in this section. For major medical centers, see subsection 4 below. The requirements for all other uses are as follows: 1. Properties occupied by three (3) or more buildings shall have an internally illuminated directory that shows the street address, layout of the complex, the location of the viewer and the unit designations within the complex. Directories shall be sufficient in number and placed in locations to insure that law enforcement and emergency personnel can easily locate a particular address or individual unit. 2. Shall not exceed six (6) feet in height or eighteen (18) square feet in area. 3. ~~Shall not include any advertising copy.~~

The City should regulate the time place and manner not content of the sign area. Note the attached model code by the Signage Foundation, which includes a good legal discussion in regards to sign content regulations.

7.104 Permitted Permanent Signs. H 1. b.

For all non-residential uses, one (1) freestanding sign shall be permitted with a maximum area of twenty-four (24) square feet. ~~The freestanding sign may include only the name of the facility, building, or organization it identifies. Such sign shall not include any advertising copy.~~ The sign must include the number of the street address, but the area of these numerals shall not be included in calculating the allowed sign area.

See above comment

7.104 Permitted Permanent Signs. H. 3. Office District

a. The sign shall not exceed a height of eight (8) feet. b. The maximum sign area is forty-eight (48) square feet. ~~Single tenant buildings; the sign may include only the name of the business or building it is intended to identify. Such sign shall not include any advertising copy.~~

This section proposes a reduction in sign height from 15' to 8', this represents an 87.5% reduction in height. This is not the time to reduce zoning rights. See the

section that addresses sign height in the Signage Foundation Model Code. We recommend that the existing maximum height of 15' be maintained for the Office Districts, or at a minimum that 12' height be maintained to match the commercial and industrial districts.

7.104 Permitted Permanent Signs H. 3. c. d. Office District

3 c. Single tenant buildings: the sign may include only the name of the business or building it is intended to identify. Such sign shall not include any advertising copy. d. Multi-tenant buildings and complexes: the sign may identify the name of the building or complex and the name of up to ten (10) businesses within the building or complex. Such sign shall not include any advertising copy.

3.d. Multi-tenant buildings and complexes: the sign may identify the name of the building or complex and the name of up to three (3) businesses within the building or complex. Such sign shall not include any advertising copy.

The City should regulate the time place and manner not content of the sign area. Note the attached model code by the Signage Foundation, which includes a good legal discussion in regards to sign content regulations.

7.104 Permitted Permanent Signs H. 5. e.

These signs may identify the name of the major medical center and up to three (3) principal departments, businesses, offices, or services in the major medical center. Such sign shall not include any advertising copy.

See above comment

7.104 Permitted Permanent Signs J

J. Reader-panel signs Electronic Message Displays. Reader-panel Electronic Message Display sign requirements are as follows: 1. Churches may use up to one-half (1/2) of the allowed freestanding sign area for a reader panel. 2. Public and Private, elementary and secondary schools, and community colleges may have one (1) freestanding reader panel sign not to exceed thirty-two (32) square feet in area and fourteen (14) feet in height. 3. Theaters. a. One (1) wall, fascia, mansard, or parapet sign may contain a reader panel. b. The area of the reader panel shall not exceed seventy-five (75) square feet or the maximum wall sign area otherwise allowed, whichever is less. The reader panel shall be used exclusively for the purpose of identifying entertainment, motion pictures, or special events which occur on the premises. 4. Electronic Message Displays are allowed in Commercial and Industrial Districts subject to the following:

a. No more than one allowed per street frontage

b. The area of the electronic message display may not exceed 50% or 1/2 of the allowed freestanding sign area

1. All electronic message signs shall have static displays. Video, animation and special effects such as traveling, scrolling, fading, dissolving and bursting shall not be permitted. Static message displays shall not be changed more than once every eight (8) seconds. . Transitions for all static message displays shall be accomplished by an immediate transition from one message to the next.

2. Electronic message signs shall not increase the brightness level by more than 0.3 foot candles over ambient brightness levels, to be measured as follows:

a. With the sign off or displaying black copy, a foot candle meter shall be used to record the ambient light reading for an area. Said measurement shall occur at least 30 minutes after sunset, from a distance which varies based upon the size of the sign, as follows:

<u>Size of Sign</u>	<u>0-100</u> SF	<u>101-350</u> SF	<u>351-650</u> SF	<u>651-1000</u> SF	<u>1001+</u> SF
<u>Distance for Measurement</u>	<u>100 feet</u>	<u>150 feet</u>	<u>200 feet</u>	<u>250 feet</u>	<u>350 feet</u>

Formatted: Font: (Default) Arial

b. With the sign on and displaying full white copy, a second measurement shall be taken from the exact location of the ambient level reading.

c. A difference between the first and second reading of less than 0.30 foot candles is acceptable. Any sign in which the difference between the first and second reading is 0.30 or greater shall be in violation of this Ordinance. Signs in violation of this Ordinance shall be shut off until they are adjusted to meet the conditions herein.

All EMCs are required to have automatic dimming capability that adjusts the brightness to the ambient light at all times of the day and night.

Additional regulations are recommended for all reader panel signs. Method to monitor and regulate night time illumination is strongly recommended. In addition automatic dimming technology is needed to allow electronic message displays to vary illumination levels from day to night and for varying ambient light conditions.

Public school districts are not subject to zoning regulations. See the attached determination from the Attorney General's Office.

7.104 Permitted Permanent Signs K. 3.

Pump-topper sign. a. Shall not exceed three (3) feet in area and does not count towards total sign area for the business. b. ~~Such signs may display instruction, price, or advertising copy pertaining to any product sold on site.~~

The City should regulate the time place and manner not content of the sign area. Note the attached model code by the Signage Foundation, which includes a good legal discussion in regards to sign content regulations.

7.105 Permitted Permanent Signs for Pedestrian Retail (PR)

~~General A. 1. A wall, fascia, mansard, parapet, projecting or window identification sign may identify the name of the business and up to three (3) principal services when the name alone does not identify the general nature of the business. It may also include the street address. Such signs shall not include advertising copy. d2. Awning, blade, and shingle signs may only identify the name of the business.~~

The City should regulate the time place and manner not content of the sign area. Note the attached model code by the Signage Foundation, which includes a good legal discussion in regards to sign content regulations.

7.104 Permitted Permanent Signs. H. 2.

Freestanding sign. One (1) freestanding sign shall be permitted per project, with the following exception for multiple street frontages in the office, commercial and manufacturing districts: a. One (1) sign may be permitted for each street if both frontages adjacent to the site are at least three-hundred thirty (330) feet.

b. Two (2) signs may be permitted for each street if the frontage adjacent to the site is at least eight hundred (800) feet. The minimum distance between two (2) signs on the same street frontage shall be three-hundred thirty (330) feet.

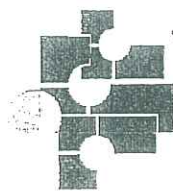
c. Additional ground signs are allowed for each 330' of additional street frontage over 800' of frontage.

This will accommodate larger projects that will require additional ground signs to provide for adequate freestanding signs.

7.108 Exempt Signs. B.

Signs not viewable beyond the boundaries of the property upon which they are located shall be exempt from the provisions of the article, except those public safety provisions contained in Section 7.102

The ASA recommends that this section not be eliminated as proposed in the draft code. This type of exemption is typical in other ordinances and works well.



GLENDALÉ

CITY OF GLENDALE
ZONING ORDINANCE UPDATE
DEVELOPER/CONSULTANT MEETING

February 12, 2009
11:00 am - Room B2

Name	Company	Address	Phone	Email
KENDALL BARKLEY	HBACA	7720 N. 16TH ST. PHX, 85020	602-244- 6545	BARKLEY@HBACA.ORG
LORIE DEVER	CMX	7740 N. 16th St PHX 85020	602-567- 1900	LDEVER@ CMXENGINEERING.COM
Alison Bygon	Valley Partnership	2817 E Camelback Rd #510	602-266- 7844	alison@ valleypartnership.org
Andrew TICE	Montalbano Homes	1860 W. University Dr. Ste 111 Tempe AZ 85281	480-720-2018	atice@montalbano.com
Debra Duerf	Valley Forward Assoc.	1124 N. 86th Way Scottsdale 85259	602- 882-8200	azgate@cox.net
Courtney Bellinus	Capitol Consulting & AZ Multihousing	P.O. Box 13116 Phx., AZ 85002	602-712-1121	Courtney@capitolconsultingaz.com
Catherine Johnson	Valley Forward	AZ State Parks 1300 W Washington PHX 85007	602 366-0491	cjohnson@azstateparks.gov
Jan Fritze	CITY OF GLENDALÉ			

[illegible]

Developer / Consultant Meeting

2/12/09

- formbased code - involve all departments that would use it
- keep flexibility of PAD (Westgate/Kalamata)
- possibility of PTO/ZTO
- PAD has lots of engineering requirements up front
- photometrics / grading / drainage up front - streamline
- Valley Forward promote sustainability recreational opportunities with the Industrial
- administrative review discussion
 - what's public and what can be done at staff level - appeals process
- flexibility of PADS to allow more flexibility of site plan locations
- zoning almost too restrictive these days
- landscape reviews easier since LA position gone
- landscape ordinance should encourage more sustainability
- graywater used for landscape - Tucson ordinance
- zoning super flexible and more
 - specific requirements come from design codes, building codes, etc.

- connectivity between urban cores
- Supnsc update now - visual preference
- BQAZ transportation comments
 - specific questions and comments
 - transportation planning framework



GLENDALe

CITY OF GLENDALE
ZONING ORDINANCE UPDATE
SIGN COMPANIES MEETING

February 17, 2009
11:00 am - Room 2A

Name	Company	Address	Phone	Email
Margarin Pickering	Glendale Planning			
JOSH GAINS	Young Electrical Sign Co.	6725 W. Chicago St	(480) 449-3726	jgains@yesco.com
Brent VanDeman	Boatz & Duke Sign Co.	4028 W. Whitten Pkwy, AZ	602-272-0350	brent@boatzandduke.com
Jim May	COE Planning		(623) 930-2594	jmay@glendaleaz.gov
Jon Froke	C.O.G. Printing		623.910.2585	
CHUMTA HURD	CHRISTY SIGNS	1825 W. S. BLK CYN HURD	602-242-4488	CHUMTA@CHRISTY SIGNS.COM
Diana Figueroa	Planning			

2/17/09

20 Update Signs

- relief in Co, better allocate square footages
- office clients want commercial standards
- modern building appropriateness
- spacing location of monument signs
- linear frontage / but deep properties should be allowed more
- fascia board up higher is okay lower level implies all businesses are on that level
- need some flexibility for locating on tenant space
- CO packages are done a lot more at staff level

Surprise, Mesa, Gilbert, Phoenix

- Separate DR board is difficult, Tempe has one
- Goodyear has predetermined criteria and those parameters can be done at staff level
- Gilbert - sandwich board signs or Tempe for Mill Avenue

freeway facing signs?

(2)

- Goodyear (others) shying about from cabinet signs
- calculation of sign area
 - most cities are 1:1
 - 775' from ROW, you get a little more like 1 1/2' for 1' for primary
- definition of frontage
- special allowance for big box
- Peoria/Scottsdale allow signs based on square footages
- monument signs
 - Mesa - max 12 and then extra 20% 14.4
 - Phoenix - up to 25'
- most separation is 100' and both streets
- 10 items of info - not including in address - name of center can be a burden
- reader boards - International Sign Association has information on what works, what doesn't
 - CMP in Phoenix
 - 2 second change is industry standard
- digital images on buildings
- initial fee up front to start process - no complex process

3

- better estimate / simple fee process
- interior design guidelines
 - trademarks
 - allowable
- modifiers
 - typical to have a lot more than 3
 - p rules about businesses within businesses - those don't count towards modifiers
- maybe change bldg box size to 60-80 ft more typical of grocery store size
- freeway sign
 - have a max (parameters) and allow flexibility from there
 - 48' start - 60-80 is common
 - 600 ft is ~~that~~ the starting point for signs 10x15 panels typical
- Simple - Phoenix is consistent/easy
- emerging technology
- business friendly
- classes for contractors
- consistency on reviews at staff levels
- simplicity helpful to all
- Signs not tied to other site development

From: Kendall Baxley [baxleyk@hbaca.org]
Sent: Wednesday, March 18, 2009 11:18 AM
To: Pickering, Maryann
Subject: Review of Zoning Articles 1 and 3

Good morning Maryann,

This communication is to serve as notification that the Home Builders Association of Central Arizona has reviewed Articles 1 and 3 of the City of Glendale Zoning Ordinance and has no comments or requests for clarification relative to either Article.

The HBACA appreciates the opportunity afforded by the City of Glendale of being a valued stakeholder in this important process and look forward to the release of further updates.

Best always,
Kendall

Kendall Baxley, AIA :: *Sr. Deputy Director Municipal Affairs*
Home Builders Association of Central Arizona (HBACA)
7720 N. 16th St. | Suite 310 | Phoenix AZ 85020
O: 602-274-6545 | fax 602-234-0442 | M: 480-205-5276
www.hbaca.org

This message is for the designated recipient only and may contain confidential, privileged or proprietary information. If you have received it in error, please notify the sender immediately and delete the original and any copy or printout. Unintended recipients are prohibited from making any other use of this e-mail. Although we have taken reasonable precautions to ensure no viruses are present in this e-mail, we accept no liability for any loss or damage arising from the use of this e-mail or attachments, or for any delay or errors or omissions in the contents which result from e-mail transmission.



Research Review Of Potential Safety Effects Of Electronic Billboards On Driver Attention And Distraction

2 Literature Review

The literature review researched two types of information to understand the safety implications of electronic billboards. One research effort examined current state practices in the regulation of EBBs to determine, for example, the features of those displays at which the regulation is directed and the consistency of regulation among the states. The other type of information was derived mostly from research studies that had the objective of understanding driver behavior in the presence of electronic billboards and/or tri-vision signs. Information of the latter type can provide a source for informed state planning.

The review begins with a description of electronic billboards, tri-vision signs, and a discussion of the relationship of these two display types to changeable message signs used for transmitting roadway status information. The next section describes the results of the review of current state practices on billboard regulation and this is followed by the review of research studies.

2.1 Types of Electronic Billboards

Technology has advanced sufficiently for billboards to provide dynamic and realistic views much like color television. The advanced EBB has the capability to present multiple views and objects that have realistic motion. In contrast, tri-vision signs provide one of three views with rotating cylinders and generate mechanical motion or movement. Since both the EBB and tri-vision sign incorporate components that display motion, some of the issues associated with EBBs are also associated with tri-vision signs. These two types will be compared in functional terms.

For the purpose of the present report, the definition of an EBB is a programmable display that has the capability to present a large amount of text and/or symbolic imagery. Some EBBs present images in realistic motion and in a large variety of colors. The tri-vision sign is defined as a display device capable of presenting three separate images sequentially by rotating triangular cylinders. Appendix A shows examples of EBBs and a tri-vision sign.

The EBB consists of several visual characteristics. EBBs present high-resolution color images, complex visual arrangements, rich variation in color, and a vast amount of images. Operational characteristics include electric power and remote control through a computer terminal. The EBB screen display elements are typically arranged in a matrix. The shape of the EBB is usually rectangular, but irregular shapes are possible. An example is the EBB on the NASDAQ Marketsite's Tower in New York City's Times Square. This EEB wraps around the corner of the building.⁽¹⁾ The NASDAQ video screen is eight stories high and covers 10,736 square ft with light-emitting diodes (LEDs).

The EBB can vary in complexity. Whereas some EBBs display motion, fine detail, and a rich variety of color, other EBBs provide a simpler image. This image is often composed of a short sequence of words in which each letter is defined by a small number of matrix elements such as a 4x6 matrix or a 5x7 matrix. The elements are typically light emitting (i.e., LEDs or incandescent) and presented against a dark background. This simpler version of the EBB shares features of the display used by governmental agencies for presenting information to drivers. This display is referred to as a changeable message sign (CMS) in this paper. The CMS typically employs a matrix technology to provide variable messages displays. Other equivalent terms currently used for this sign are variable message sign (VMS) and, to a lesser extent, dynamic message sign (DMS). The permanent CMS is found mounted above the roadway whereas a portable CMS is usually mobile and is located on the shoulder of the roadway.

Whereas the EBB can display a vast number of images, the tri-vision sign is more limited. The typical tri-vision sign is composed of a series of vertical or horizontal cylinders each of which has a triangular cross section. Each partial

rotation of the group of triangular cylinders produces a different image. A single tri-vision sign typically displays, at any given time, one of three images. Although the final composite image does not provide motion, there is still movement due to the transition from one image to another as the cylinders rotate. This movement can act as an attention-getting feature that attracts the driver's attention to the display. One such feature present during the rotation is the partial viewing of two images in transition, where one image advances as the other retreats. Another feature is the change in reflective qualities among the different sides of the triangular cylinders during the transition.

2.2 State Regulations and Policies on Electronic Billboards

2.2.1 Introduction

This section of the literature review pertains to the regulation of EBBs across the United States. A review of existing states' regulations and policies is presented first since it is believed that this will provide the reader with an understanding of how EBBs fit into various states' outdoor advertising policies. Each state's regulations generally derive from the 1965 Highway Beautification Act (HBA). A detailed history and overview of the federal outdoor advertising control program, which includes the HBA, can be found on the FHWA's ORES web site: <http://www.fhwa.dot.gov/realestate/oacprog.htm>. A review of state outdoor advertising regulations revealed that common billboard guidelines governing EBBs and tri-vision signs do not exist. While states generally have consistent regulations governing static billboards, regulations covering EBBs and tri-vision signs vary widely. Implementation practices differ significantly from state to state. A broad spectrum of regulations exists, ranging from lenient control to the prohibition of outdoor advertising.

2.2.2 Sources of Information

Federal and state Department of Transportation (DOT) personnel provided information regarding state regulations and policies. The information pertained to whether states regulate EBBs, and if so, in what manner. The sources of information are described briefly as follows:

- **State Outdoor Advertising Regulations.** Efforts were made to obtain the most current billboard regulations nationwide. These regulations were collected from various sources, such as the state DOT directly, a state's website, or from the National Alliance of Highway Beautification Agencies' (NAHBA) website. Overall, regulations were obtained from 44 states.
- **Personal Communication.** In addition to obtaining state documents, the researchers contacted states and FHWA division offices. Since a supporting contractor was to be directly contacting state DOTs, an introductory e-mail message was sent from FHWA Headquarters to each Division Office to notify the FHWA Division Office and the state DOTs of the contractor's role. The FHWA contractor contacted state personnel who were knowledgeable of their state's billboard regulations. The telephone calls were of an unstructured nature, and their purpose was to determine if local constituents had submitted comments or complaints about EBBs, and if research had been conducted on EBBs in the state.

FHWA Division Offices. Nine FHWA Division Offices were contacted. FHWA's ORES recommended some of the selected Division Offices and others were selected randomly.

State DOTs. Some state DOT personnel were contacted at the suggestion of their local FHWA Division Office while other states were selected randomly. Ten state DOTs were contacted by telephone.

National Alliance of Highway Beautification Agencies (NAHBA). In the early 1990s, a group of individuals responsible for directing or managing their state's outdoor advertising program formed the NAHBA. The Alliance meets regularly to discuss new developments in technology, upcoming legislation, and ways to improve or streamline regulation of outdoor advertising, junkyards, landscaping, and visitor centers. Additionally, NAHBA maintains a website that contains outdoor advertising regulations of numerous states and the federal government.

A NAHBA meeting was held in Washington, D.C., in late January 2001. Two members of the research team and their FHWA contracting officer technical representative met with NAHBA members after the formal meeting had ended. Representatives of Florida, Kentucky, Missouri, Oklahoma, and Utah were present. The meeting served a purpose similar to the telephone calls, except that it allowed a more interactive conversation in more detail.

NAHBA provided the responses from an informal email questionnaire pertaining to EBBs and a tri-vision sign survey to the research team. These are presented in a subsequent section of this report.

2.2.3 State Regulations and Practices

In a July 1996 memorandum to FHWA Regional Administrators, the ORES provided additional interpretation of advertising technology to the individual states regarding off-premise changeable message signs. An off-premise sign is a sign that disseminates information that **does not** directly relate to the use of the property on which the sign is located. ("Changeable message signs are acceptable for off-premise signs regardless of the type of technology used, if the interpretation of the State/Federal agreement allows such signs," page 1, paragraph 2, sentence 4 of the memorandum).

In a July 1998 memorandum, the ORES reaffirmed their policy that off-premise signs using animated or scrolling displays that are dependent on flashing, intermittent, or moving lights were not conforming signs. This decision was made after careful review of a videotape showing the full-motion EBB erected in Scottsbluff, Nebraska. It was concluded that such signs raise "significant highway safety questions because of the potential to be extremely bright, rapidly changing, and distracting to motorists," (page 1, paragraph 4, sentence 1 of the memorandum).

A majority of states have a policy regarding the lighting of billboards, and through this policy, states regulate EBBs. While common themes are present in most lighting regulations, each state's laws have unique wording. As an example, the Arkansas State Highway and Transportation Department's Outdoor Advertising Policy,⁽²⁾ Regulations for Control of Outdoor Advertising on Arkansas Highways, as authorized by Arkansas Act 640 of 1967 and Highway Commission Minute Order No. 77-6, section III, subsection D, Lighting states:

A. Lighting Signs may be illuminated, subject to the following restrictions:

1. Signs, which contain, include, or are illuminated by any flashing, intermittent, or moving light or lights are prohibited, except those giving public service information such as time, date, temperature, weather, or similar information.
2. Signs which are not effectively shielded as to prevent beams or rays of light from being directed at any portion of the traveled ways of the Interstate or Primary highways and which are of such intensity or brilliance as to cause glare or to impair the vision of the driver of any motor vehicle, or which otherwise interferes with any driver's operation of a motor vehicle are prohibited.
3. No sign shall be so illuminated that it interferes with the effectiveness of, or obscures an official traffic sign, device, or signal.

2.2.4 National Alliance of Highway Beautification Agencies

Tri-vision Sign Survey. A 1999 survey sponsored by and presented at the annual NAHBA conference reviewed the tri-vision sign advertising regulations of every state and Washington, DC. The following results show that a majority of states are addressing current advertising technologies in their outdoor advertising regulations. At the time of the survey:

- Nine states had specific regulations governing signs,
- Nine states had regulations on tri-vision signs that were either being drafted or in pending legislation,
- Fifteen states had regulations regarding moving parts and/or lights,
- Nine state had no regulations on tri-vision sign, and
- Six states as well as Washington, DC, prohibited tri-vision signs.

Table 1 provides a summary of tri-vision sign exposure dwell times and transition times that were presented in the 1999 NAHBA survey.

Table 1. Timing Boundaries of Several Tri-Vision Sign Policies.

Timing Boundaries	Average	Maximum	Minimum
Minimum Exposure Dwell Time (sec) ¹	7.32	10	4
Maximum Transition Twirl Time (sec) ²	2.16	4	1

Source: NAHBA 1999 Conference.

1. *Minimum Exposure Dwell Time:* For billboards that change messages, (e.g., tri-vision sign or CMSs), the exposure time can be defined as the minimum amount of time, in seconds, that a message must be shown. Some minimum exposure times have been derived from analytical calculations (based on speed limit and the number of faces of a billboard that can be seen) while other minimum exposure times have come in the form of recommendations from outdoor advertising suppliers or have been based upon engineering judgment.
2. *Maximum Transition Twirl Time:* The transition time is the amount of time, in seconds, that is required for a billboard (such as an EBB or tri-vision sign) to automatically change messages. Many states have set a maximum transition time for this change. The maximum was originally determined by taking into account the mechanical constraints of older tri-vision signs and attempting to limit the amount of visual distraction caused by a sign's transition. Due to advances in technology, transitions executed by a full-motion video billboard are virtually instantaneous.

Electronic Sign Data. In early February 2001, NAHBA asked its membership to answer four questions regarding EBBs. One question relevant to this research is: "Do you have a definition of an electronic sign?" Of the 20 responses that were received, five states had a definition, 14 did not have a definition, and one state was in the process of rewriting its definition.

2.2.5 State Outdoor Advertising Regulations

A review of statutes was conducted to identify state prohibitions on specific characteristics of signs. This review is presented in Appendices B and C. The results indicate, in part, that of 42 states:

- Thirty-six states had prohibitions on signs with red, flashing, intermittent, or moving lights,
- Twenty-nine states prohibited signs that were so illuminated as to obscure or interfere with traffic control devices, and
- Twenty-nine states prohibited signs located on interstate or primary highway outside of the zoning authority of incorporated cities within 500 ft of an interchange or intersection at grade or safety roadside area.

Additional information on other sign characteristics includes insufficient shielding of light, timing limits, and sign location relative to traffic control devices.

2.2.6 Concerns about Electronic Billboards

Numerous states have attempted to identify a relationship between EBBs and safety by using traffic conditions as a surrogate measure. The states of Nevada, Utah, Texas, New York, New Hampshire, and Massachusetts reported no evidence of increased traffic safety problems after the installation of electronic information displays in their city centers and along their highways. Additionally, five state DOT personnel were asked if a crash relationship with EBBs existed in their states; the responses were that a relationship between crashes and EBBs was not identifiable. However, one belief is that EBBs are typically on congested roadways where drivers have time to look at the sign, so it is difficult to determine if the EBBs cause crashes, let alone traffic congestion.

2.3 Reports on Billboards and Safety

Determining the effect of roadway commercial advertising billboards on safety is a difficult endeavor for several theoretical and methodological reasons. First, crash frequency is often used as a measure of safety, yet crashes occur relatively infrequently, so changes in frequency may be subtle and are not easily attributed to particular factors. In addition, distraction effects may interact with other factors, such as weather. Furthermore, crash reporting procedures differ across jurisdictions and may not refer to billboard distraction as a factor in the crash. Additionally, drivers may be unlikely to identify distraction as the cause of a crash for liability reasons. Regardless of these difficulties, researchers have examined the effects of billboards on safety. The results are mixed and inconclusive, as shown below.

2.3.1 The Wachtel and Netherton Report

The safety and aesthetics of commercial electronic variable message signing were reviewed by the FHWA in 1980⁽³⁾ and are summarized below. Part of that effort included a review of published studies on the safety effect of roadside advertising signs, including several field and laboratory studies from 1951 to 1978 on non-electronic advertising billboards, and one analysis in 1976 of an electronic advertising sign in Boston.

The Minnesota Department of Highways concluded from a field study in 1951 that an increase in commercial billboards would result in an increased crash rate. A 1951 field study conducted by Iowa State College concluded that more crashes caused by driver inattention occurred on road segments that contained billboards. The Michigan State Highway Department in 1952 found that advertising signs did not correlate with the roadway's crash experience, except for illuminated (neon) signs, which did correlate with an increased crash rate. A 1961 study of California Route 40 concluded that road segments with billboards experienced significantly more crashes than segments without billboards. A 1967 field study compared the crash history of three locations in Chicago before and after the installation of three illuminated, commercial changeable message signs. Crash rates did not change at two of the sign locations, but the third sign location showed an increase of crashes. The third sign had alternating lights, showed several advertising messages, and was illuminated by bright white lights. The rapid increase in crashes led state highway officials to request that blue lights replace the white lights.⁽³⁾

The Tele-Spot sign in Boston was an off-premise commercial electronic sign. The sign was visible from the Central Artery in the midst of complex on- and off-ramps, regulatory signs, and guide signing. The Massachusetts Outdoor Advertising Board conducted an analysis of traffic crashes three years before and two and a quarter years after sign installation. The analysis showed an overall reduction in the Average Daily Traffic (ADT) and crashes along the expressway, but on the areas of the expressway from where the Tele-Spot was visible, the crash reduction was 10 percent less than the overall reduction. The Board regarded the 10-percent difference as an indication that the Tele-Spot sign was a distraction and a safety risk, and consequently revoked the license for the sign.⁽³⁾

2.3.2 Wisconsin DOT Report

The Wisconsin DOT examined the crash rates on Interstate 94 eastbound and westbound adjacent to the Milwaukee County Stadium⁽⁴⁾. The analysis compared the crash rates three years before and three years after the installation of a variable message advertising sign. The sign, installed April 13, 1984, displayed sporting scores and advertisements, and changed images an average of 12 frames per minute. The purpose of the comparison was to assess whether the presence of the sign correlated with a change in the crash history of I-94. To determine crash rate, the Wisconsin DOT inventoried crashes that occurred on the segment on I-94 from where the sign was visible, categorized them into side-swipe and rear-end crashes, and determined the ADT from an automatic traffic recorder. The crash rate was derived from the equation:

$$\text{crash rate per million vehicle miles} = \text{crash frequency} / (\text{length of segment}) * \text{ADT} * 10^6$$

Eastbound Segment. The crash rate for the three years before installation was 3.12 crashes per million vehicle miles traveled (VMT). The three-year crash rate after installation was 4.25 crashes per million VMT. The increase in crash rate after installation was 1.13 crashes per million VMT, or 36 percent. Specifically, the rate of increase for sideswipe crashes was 8 percent, and the rate of increase was 21 percent for rear-end crashes.

Westbound Segment. The crash rate before installation was 2.91 crashes per million VMT, and 3.53 per million VMT after installation, an increase of 0.62 crashes per million VMT or 21 percent. The rate of increase was 35 percent for both sideswipe crashes and rear-end crashes.

The Wisconsin DOT concluded from its analysis that the variable message sign had an effect on traffic safety, notably an increase in the rate of sideswipe crashes. In addition, the report concluded that the greater increase in crashes for the eastbound segment was due to the orientation of the sign towards eastbound traffic. (This sign was removed 16 years after it had been installed, when the Milwaukee County Stadium was demolished. A similar sign was installed on the new stadium.)

2.3.3 The Curriden Article

A recent court case in Texas arose from a crash in an airport caused by a driver reading an electronic sign that listed departure and arrival times, and gate information. The driver stopped his vehicle to read information on the

sign. A second vehicle swerved around the stopped vehicle and side swiped a vehicle in the adjacent lane, resulting in a three-vehicle crash. Two drivers were injured in the crash and sued the airline that owned the EBB. A jury found that the EBB was the indirect cause of a multiple vehicle crash at the airport and returned a negligence verdict against the airline. The airport subsequently removed the EBB.⁽⁵⁾

2.4 Potential Safety Factors

2.4.1 *Distraction*

The review of crashes presented previously suggests that EBBs may be associated with a higher crash rate under certain conditions. If this possibility is verified through further research, then it can be asked whether these crashes are a result of driver distraction in which the distracting stimulus is the EBB.

Distraction can be a framework in which to view EBBs and safety. The safety consequences of distraction from the driving task can be profound. Treat et al.⁽⁶⁾ found that driver inattention and improper lookout increase the likelihood of crash occurrence and are major factors underlying the causes of crashes. According to Wang, et al.,⁽⁷⁾ an analysis conducted by the National Highway Traffic Safety Administration (NHTSA) of causal factors of crashes showed that distraction by sources external to the vehicle accounted for 3.2 percent of the crashes. The external sources included people, events, and non-specified objects. The NHTSA analysis did not identify the external objects, nor did it identify billboards as among the sources of distraction. However, the data suggest that, on occasion, external stimuli can be sufficiently distracting to drivers, causing or resulting in a crash.

Distracting Stimuli. One type of distracting stimulus is the unexpected event that results in an involuntary reaction. This type of stimulus is unanticipated and produces a surprise or orienting response - the person will redirect his or her attention to the new event to identify it and assess its significance. Such a stimulus may be an event that is not typical for that time or place, e.g., a flash of light, movement or sound.

A more subtle form of distracting stimulus can be one in which the stimulus has a less surprising quality, and thus presents more time for the driver to decide whether to attend to the stimulus and how much attention to direct to the stimulus. Dorneim⁽⁸⁾ documented that this has been a problem for pilots. In some situations, a pilot will occasionally attend more to a secondary task and neglect the primary task of flying the plane, sometimes resulting in a crash. Although the task of flying is obviously different from driving, there may be lessons to be learned for drivers. NASA is currently conducting research on ways to avoid this type of air crash. It may prove useful to check the progress of this research to see whether NASA research results have implications for driver distraction. Some of the research questions involve understanding how people know when to return their attention to a task, as well as identifying the limits of switching between tasks.

Measures of Distraction. For this project, driver distraction is characterized as deterioration in driving performance, the primary task, while attending to a second, non-driving task. The second task is subordinate to the driving task. An example of a non-driving task is operating an audiocassette system or using a cellular telephone. When the safe operation of the vehicle is degraded by the performance of the second task, the second task is defined as a "distractor."

Safe operation or control of the vehicle is recorded with measures of effectiveness (MOE) for driving. These measures include lateral deviation of the vehicle and maintenance of appropriate speed, as indicated by headway measures. Lack of control indicated by excessive lateral deviation or inappropriate speed could result from distraction, sleepiness, inability to see the road because of weather or lighting, poor perception of road geometry requirements, or other reasons. Since there are multiple factors that can contribute to lack of vehicle control, the design of a distraction study must take into account these other factors and ensure that they do not confound the design and allow misinterpretation of the data.

Lateral deviation can be measured by analysis of variability in steering wheel position, and/or varying distance of the vehicle from a lane marking on the road. When measuring lateral deviation, a certain amount of variability in deviation is expected. Greater-than-normal lateral variation may indicate a degree of lack of vehicle control. An example of lateral deviation occurs during the performance of a non-driving task such as the selection, orientation, and insertion of an audiocassette into the cassette player while performing the primary task of negotiating a curve. If the cassette operation is performed in the same manner and at the same rate as when the vehicle is motionless, there is a high likelihood of lateral deviation. This scenario of cassette operation would be an example of a

distracting task.

Another measure of safe vehicle control is the maintenance of appropriate speed. One driving behavior that would lead to improper speed is the selection of a more or less constant speed (speed invariance) when nearby vehicles change speed. This could result in an unsafe headway condition. Lack of safe control due to improper speed selection could be due to reasons similar to those listed above for lateral deviation. Another behavior measured by speed is the slowing of a vehicle to view an item external to the vehicle. Braking for emergencies may also be considered for a measure of distraction.

2.4.2 *Conspicuity of Displays*

To what degree does an external, conspicuous stimulus unrelated to driving distract a driver from the driving task? This question is basic to the notion that a billboard may degrade driving performance by diverting attention away from the driving task. If a billboard degrades driving performance, it may be useful to identify the components of the billboard that can distract drivers. Some possible distracting components of a display are motion, complexity, and illumination. If such qualities are relevant to distraction, do they act alone or do they interact with each other? To the extent that these qualities are identifiable, it may be possible to understand their effect on distraction.

A brief review conducted by Hughes and Cole⁽⁹⁾ identified the physical properties of a conspicuous object. Important properties that contribute to conspicuity include object size, object contrast with its immediate background as well as the complexity of the background. An additional property is "the boldness of the graphics used to display a message."

According to Cole and Hughes,⁽¹⁰⁾ conspicuity consists of two types: attention conspicuity and search conspicuity. Attention conspicuity is the "...capacity of an object to attract attention, and...might be measured by the probability of the object being noticed when the observer has not had his or her attention directed to its likely occurrence." Search conspicuity is "...the property of an object that enables it to be quickly and reliably located by search." Cole and Hughes suggest that eye movement that is responding to a stimulus in the peripheral visual field can be used to infer attention conspicuity in the visual mode. Such movement may be a "quasi-reflex eye movement that is related to human defense reaction."⁽¹⁰⁾

Theeuwes⁽¹¹⁾ challenged the view that conspicuous objects attract attention automatically. Instead, drivers will attend to the driving task and not a distractor. His past research showed that subjects ignored salient objects that were irrelevant to a search task. In a subsequent study, participants were instructed to locate a task-related stimulus (a blue sign) in a video taken from the driver's perspective. Distracting stimuli (e.g., a pedestrian in an orange jacket) were present in some experimental conditions, but not others. The results indicated that when the target stimulus, or blue sign, was in an expected location, the presence of the distractor had no impact. However, when the target was in an unexpected location, thus increasing the search time, the presence of the distractor increased the time required to locate the target above that due to expectation effects.

The visual environment affects the conspicuity of objects. Since drivers obtain travel related information by searching the visual environment for a target, such as a street sign, outdoor advertising can compete with targets of driving-related information. The concept of "visual noise" refers to non-target objects in an environment and can be used to determine a sign's conspicuity in a particular environment. Akagi et al.⁽¹²⁾ state that "Objects causing visual noise can be defined as objects that hinder drivers' field of view, such as billboards and buildings along roadsides." This study reported that increases in the visual noise (i.e., the number of signs in a roadway location) correlated with longer search time required for drivers to locate a target sign.

In a study performed by Hughes and Cole⁽⁹⁾ regarding the conspicuity of roadside objects, drivers reported "all the objects or things that attracted their attention" as they drove through 20 km of residential streets and arterial roads. Afterwards, they observed a film of the same route, taken from the driver viewpoint. Advertising displays accounted for 13.7 percent of reports in the driving study and 10.2 percent in the laboratory study. Driving related objects (road, traffic control devices (TCDs), vehicles, and people) accounted for 51.4 percent of reports in the driving task and 57.9 percent in the laboratory study. Other non-driving task elements included immediate and general roadway surroundings. Advertising elements were reported equally on arterial and shopping center routes, and more so than on residential streets. However, in residential streets, drivers directed more attention to non-driving related elements. This suggested a possible spare attention capacity.

A field study by Luoma⁽¹³⁾ analyzed driver eye fixations on roadside advertisements during a 50 km drive in Finland. Results indicated that accurate perception of advertisements was associated with longer fixation times (2.3 sec) than the times for pedestrian markings and speed limit signs (0.4 sec to 0.5 sec). The author concluded, "...long fixation times indicate that the characteristics of roadside advertisements related to information ergonomics are poor."⁽¹³⁾ Information ergonomics is the practice of providing information in the most efficient way, such that viewers can access the information quickly and clearly.

Roadway Context. Determining whether billboards influence driver behavior would require understanding the roadway context of a billboard. For example, roadway factors such as the angular distance of a billboard, billboard placement and volume characteristics of an intersection, may influence driver responsiveness to visual stimuli and the experience of workload. In this sense, information on the effect of the roadway context on driving performance should assist in defining appropriate billboard locations. Research on driver search behavior in high and low volume intersections by Rahimi, Briggs and Thorn⁽¹⁴⁾ in 1990, suggests that higher volumes of traffic affect driver eye and head movements. The research indicates that the greater visual complexity associated with the high volume intersection required drivers to search the environment *more* than in the low volume intersections. It can be conjectured that additional visual stimuli, such as billboards, may add additional demand to driver workload in high-volume intersections.

2.4.3 Legibility

One event that can be considered a distraction occurs when a driver passes a sign where the text has poor legibility. The weakness in legibility may be due to poor character font design, improper spacing of letters, or other factors. However, if the information is of sufficient interest, the driver may try to read all of the text anyway. Such a decision could take time away from the driving task thus increasing crash risk. If on the other hand, the sign had text that met legibility standards, less effort would be required to read the sign. Although this situation is a more subtle distraction than that due to perceived motion in a sign, it still could present potential for crash risk. Legibility information is available for CMSs. Although the CMS is restricted to providing roadway related information, its legibility requirements may be relevant to the design of the simpler EBB

Luminance and Luminous Contrast. Garvey and Mace⁽¹⁵⁾ examined CMSs to identify the features that contribute to their visibility. Both field and laboratory studies were employed following a review of the literature. Of particular interest in this report are the requirements for lighting, such as the luminance value and contrast ratio necessary for legible viewing. The study discussed requirements for displays such as LEDs, fiber optics, lamps, flip discs, and reflective discs. The authors provide guidelines that are aimed at improving the visibility of all CMSs, regardless of technology.

Minimum luminance values were recommended for CMS visibility. These values are based on the 85th percentile driver accommodated at 198 m (650 ft). Age and position of the sun were two of the most significant factors when determining minimum luminance. Values are presented for drivers in two age ranges (16-40 and 65 or older). When the CMS is backlit (sun behind and above CMS) or under washout conditions (low sun shining directly on CMS), 1000 cd/m² is recommended for both age groups. This value accommodates less than 50 percent of older drivers at any luminance level with extreme sun angles. When the sun is directly behind the CMS, few if any people will be able to read the characters under any luminance level. When the sun is overhead the 65 years and over group still requires 1000 cd/m², but only 850 cd/m² are required for the younger group. During overcast or rain, 600 cd/m² is required for the older group and 350 cd/m² for the younger. For the nighttime condition, both groups require a luminance of 30 cd/m².

According to Garvey and Mace,⁽¹⁵⁾ there should be a minimum luminous contrast between the unlighted and lighted elements on a CMS; a maximum luminous contrast was not provided. Contrast orientation should always be *positive*, that is, the characters should be lighted against a dark or less luminous background. A negative contrast is likely to result in a 25 percent shorter legibility distance.

Contrast luminance for a CMS was determined with the formula:

$$\frac{L_t - L_o}{L_o}$$

where:

L_t = luminance of a character module with all of the elements "on"

L_o = luminance of a character module with all of the elements "off."

The minimum acceptable contrast luminance is 5, and the optimal contrast luminance varies from 5 to 50.

A summary of existing literature on sign visibility performed by Kuhn, Garvey and Pietrucha,⁽¹⁶⁾ examined the two main research areas of sign detection; that is, sign conspicuity and sign legibility. The emphasis was on the more familiar and traditional sign rather than electronic signs. It is likely, however, that the design of an electronic sign would benefit from some of this information. A series of visibility guidelines for on-premise signs was presented. (An on-premise sign disseminates information that directly relates to the use of the property on which it is located.) Later research by Kuhn⁽¹⁷⁾ compared lighting methods (external illumination, internal illumination with opaque background, internal illumination with translucent background and neon) under day and night conditions to examine sign visibility features.

Claus and Claus⁽¹⁸⁾ addressed the issue of startling types of signs, such as those employing "flashing or animation to catch attention." These authors discuss different types of motion or movement. One of these is "...jumping arrows, or rapidly chasing or flashing lamp borders. ... (that) should perhaps be limited to midways and to rows of theater marquees." They did allow for other pictorial sequences that may be more acceptable as well as alternating displays such as the time and temperature display.

Alphanumeric Characters and Their Spacing. The design or selection of font type and the spacing between characters (letters), words and sentences are critical in achieving effective legibility of signs, especially when legibility is defined by the distance at which a sign can be read. Garvey & Mace⁽¹⁵⁾ provided draft guidelines for the design of the elements and characters that compose a word and word groupings on a CMS, in which the character font is composed of light emitting elements. To achieve effective legibility, a number of features are considered. It is important to address each of the features, since they interact with each other. For example, to design an upper case character font, use a 5 x 7 matrix of light emitting elements. However, with a small matrix of this size, it is well to avoid thickening of a line in a character (e.g., as in an "I" or "T") by adding another row or column of elements because the legibility distance is shortened by about 25 percent.

Font design for exterior signs should be simple without serifs. Additional information was provided on the height of the character, the proportion of the character or width-to-height ratio, and stroke width of the character. Further information was provided on the spacing between letters, between words and between lines of characters. Signs with light emitting elements have special characteristics. Light emitting elements provide high contrast between characters and background and thus provide superior performance over reflective signs at night. However, the light intensity requires careful adjustment. According to Garvey and Mace,⁽¹⁵⁾ high contrast produced by lighted elements at night can "create halation or irradiation, blurring letters with wide stroke widths."

Message Length. A series of studies was performed by McNees and Messer⁽¹⁹⁾ to evaluate urban freeway guide signing. A study relevant to EBB issues examined the reading time required for guide signs. Study variables included "bits" (i.e., the amount of information on each panel) and number of sign panels. A typical sign panel contained an exit number, exit direction, cardinal direction, route number, and two destinations. It also included symbols such as a shield, and directional arrows. Examples of bits of information were: "I-395," "Washington, D.C." and "South." Each sign panel had, on average, six bits of information. The display time of the sign simulated the total time a driver would have available to read a guide sign in a typical freeway environment. The display times provided for reading the signs represented three traffic conditions: "extreme" (2.5 sec display time), "minimum" (4 sec display time), and "desirable" (6 sec display time). Median reading times for these conditions were: 1.7 sec (extreme), 2.0 sec (minimum), and 2.9 sec (desirable). The results indicated that the time used to read the signs was dependent on quantity of information per sign as well as time available to perform the task. Based on these

results, the authors concluded that the information content of a highway guide sign should not exceed six bits of information per panel.

2.5 The Driver

2.5.1 Driver Age

The analysis of distraction should consider the effect of driver age. If a significant portion of the driving population is more susceptible to distraction, then research on the relationship between distraction and safety should recognize this susceptibility. Such research could provide information about age-related differences regarding visual capability or reaction times that are relevant to driver reaction to EBBs. Both older drivers and young/inexperienced drivers are examined in this discussion.

The highway safety community recognizes that the probability of crash involvement varies with driver characteristics, most notably age. Highway data analysis demonstrates that the young driver and older driver populations have high crash involvement, and elevated injury and fatality rates. According to the Transportation Research Board's Special Report Number 229,⁽²⁰⁾ the high involvement rate of older drivers in crashes is second only to the rates of young drivers

Experience and age *may* be important factors to consider in the evaluation of the effects EBBs have on safety. The research literature provides a firm foundation for stating that age and experience need to be considered. If EBBs are ultimately found to have a high degree of attention conspicuity - that they compel drivers to attend to them - then it is reasonable to expect that populations such as older or inexperienced drivers, who have less attention to spare, will be placed at greater risk by EBBs.

The Older Driver. According to Barr and Eberhard,⁽²¹⁾ the safety and mobility of older drivers, generally defined as 65 years of age and above, are highly relevant to transportation planning. Because of an increasingly aged population, the number and proportion of older drivers are rising. By 2020, Waller⁽²²⁾ has estimated that 17 percent (50 million people) of the United States population will consist of people 65 years and older, compared to 12 percent in 1988. The proportion of older adults licensed to drive is increasing. For example, in 1980, 60 percent of older adults (at least age 65) were licensed drivers, compared to 70 percent in 1989. These data point to the need to include older drivers in research programs on roadway safety, including the evaluation of EBBs and distraction.

Older drivers have a high crash risk per mile.⁽²²⁾ They are involved in a disproportionate number of fatal crashes and multi-vehicle crashes where they were the responsible party,^(23, 24) and are over-represented in crashes that involve turns, merges, and yielding the right of way.⁽²⁵⁾

Recent studies performed by Ball and Owsley⁽²⁶⁾ point to cognitive demands as influential factors in driving. Visual processing speed and the ability to handle selective and divided attention demands may have the greatest impact on crash rates. An increase in age did not directly contribute to crash involvement. However, an increase in age correlated with lower processing speed and decreased attention. The fact that attention and visual processing speed degrade with age may be symptomatic of the increasing inability of older drivers to encode and process all but the most important information in the driving environment.

The Younger Driver. The young driver (16 to 24 years old) is more likely to be involved in a crash than drivers of other ages, and a driver under 23 years of age is 2.5 times more likely to be killed in a crash than drivers 25 years and older, according to the NHTSA.⁽²⁷⁾ Whereas the young driver crash risk on a per-mile driven basis is greater than the crash risk of other drivers, their risk decreases on the continuum from 16 to 24 years old, according to Lerner et al.⁽²⁸⁾

Incidents involving younger drivers are attributed to age and experience-related factors. Widely recognized age-related factors reported by Decina et al.⁽²⁹⁾ include risk-taking and alcohol consumption. Experience-related factors include the psychomotor, perceptual, and cognitive skills required for steering and maintaining speed, driving during high risk periods (such as at night), inefficient or inappropriate scanning behavior, poor hazard recognition, and poor driving judgment and decision-making.

The young driver demonstrates poorer coordination of separate driving tasks and tends to concentrate on one

aspect of performance, such as maintaining lane position.⁽²⁹⁾ According to Mournat et al.,⁽³⁰⁾ the visual scanning behavior of a young driver is less effective than that of mature drivers because the young driver tends to focus more closely in front of the vehicle. Furthermore, Miltenburg and Kuiken⁽³¹⁾ report that the inexperienced driver is likely to have attention drawn to irrelevant but "attention-getting" objects. The aforementioned research suggests that the young driver may be more vulnerable to distractions than the more mature driver. The data indicate that the young driver has weak situational awareness and relatively poor focus on the driving task itself. Thus, distracting stimuli, inside or external to the vehicle, may adversely affect the young driver.

2.5.2 *Driver Familiarity with Route*

Commuters and visitors require different information while traveling. The familiar driver requires more information on traffic conditions and incidents, whereas the visitor requires more navigational and guidance information. A field study of driver visual search and scan patterns performed by Mourant et al.⁽³⁰⁾ showed that drivers' visual fixations on traffic, road and lane markers, and bridges and road signs decreased as the drivers became more familiar with the routes. One conclusion from these data is that drivers who are familiar with a roadway may be less likely to attend to familiar signs, including EBBs. Thus, differences between visitors and commuters in visual attention to commercial signs may be a relevant variable in assessment of distraction effects of EBBs since more eye-catching displays may be needed to attract the commuter.

2.6 Measures of Effectiveness

2.6.1 *Surrogates*

Commercial EBBs are designed to "catch the eye" of drivers. Their presence may distract drivers from concentrating on the driving task and the visual surrounds. Research in other areas share a concern about driver distraction and may be applicable to the question of EBBs and driving performance. Investigations of driver distraction and safety have notably focused on two cases: cellular telephone use while driving, and in-vehicle information displays. In each case, the application of a new technology raised concerns about driver distraction. The following sections highlight research in these areas.

Cellular Telephone Use in Vehicles. The number of cellular telephone users reported by Cain and Burris⁽³²⁾ in 1998 was 63 million, and at a growth rate of 40 percent per year, the NHTSA⁽³³⁾ estimates that the number of users will reach 80 million by 2000. The increase in the number of cellular telephone customers, in combination with high-profile crashes involving cellular telephone use, has raised public awareness of the safety aspects of in-vehicle telephone use and led to legislative initiatives aimed at restraining telephone use in vehicles.

Crash Risk Analyses. Redelmeier and Ticshirani⁽³⁴⁾ performed an epidemiological study of crash risk associated with cellular telephone use linked customer telephone bills to crash records maintained at the New York Collision Reporting Center to identify telephone use at the time of a crash. The study concluded that cellular telephone use quadrupled the risk of a crash during the call. Another epidemiological study performed by Violanti⁽³⁵⁾ found a 34 percent increase in risk of crash among vehicles with cellular telephones.

Application to EBBs. Using cellular telephones while driving imposes at least three tasks: first, manually manipulating the telephone, which could affect control of the vehicle; second, glancing at the telephone, which requires looking away from the roadway; and third, engaging in conversation, which may disrupt concentration. The relevance of information on cellular telephone use to EBBs lies in visual (glancing) and cognitive (mental engagement) behaviors. Viewing EBBs or using a telephone requires drivers to look away from the roadway for some period. Similarly, reading a sign could disrupt a driver's concentration, just as engaging in a telephone conversation might.

According to Cain and Burris,⁽³²⁾ hands-free telephone use carries about the same risk observed in hand-held use, and a NHTSA report⁽³³⁾ cites that a telephone conversation is a factor in crashes more frequently than dialing. Cain and Burris⁽³³⁾ believe that the type of conversation is significant in determining crash risk, and McKnight and McKnight⁽³⁶⁾ believe that complex and intense conversations the riskiest and simple conversation relatively risk-free. Thus, becoming mentally preoccupied can be as distracting to a driver as manually operating a telephone or glancing away from the roadway.

In-vehicle Information Systems. Advances in communications technology have enabled the development of electronic devices that display traveler-related information to drivers in transit. Such devices can potentially redirect (or distract) a driver's attention from the primary task of driving. An examination of in-vehicle distractions may contribute to an understanding for potential out-of-vehicle distractions such as EBBs.

The presence of in-vehicle devices that provide traveler-related information, such as turn-by-turn directions, has raised questions regarding the amount of time taken away from the driving task by the information display. One concern is that a driver will underestimate the amount of time required to use the device, take longer than expected, thus taking too much time away from the driving task. This is similar to the concern in which a driver spends too much time looking at a stimulus external to the vehicle.

In order to measure visual distraction associated with the use of in-vehicle devices, a methodological approach was developed based on eye glances. This method calculates the total number and average duration of eye glances required to operate specific in-vehicle devices. Data compiled from research in the late 1980's defined the average time for a single glance and the average number of total glances required to use a variety of devices. Devices were the speedometer, mirrors, standard radio, climate controls, smoking/lighting, fuel gage, heating/air conditioner, map, and others. For example, using the radio required 1.20 sec of glance time and 3.5 total glances, and reading the map required 1.70 sec of glance time, and 5.0 total glances. Wierwille and Tijerina⁽³⁷⁾ performed one investigation into this issue that compared exposure levels for in-vehicle devices to number of crashes associated with the use of these devices. Exposure was the number of glances, multiplied by the time for a single glance, multiplied by the frequency of use. When the variety of in-vehicle devices was examined in light of both number of crashes and their exposure, a linear relationship resulted such that the greater the exposure, the greater the number of crashes. This study suggested that the "...relative number of accidents is directly related to visual resource allocation for in-vehicle tasks." The data regarding amount of time used for in-vehicle devices reported in this study may be a useful starting point for estimating the maximum amount of time that a driver can attend to a distraction outside the vehicle.

2.6.2 Current Measurement of Distraction

It would be beneficial to measure the effect that EBBs have on driver distraction. Such measures for EBBs and other stimuli external to the vehicle have not yet been developed. However, there is one approach being developed for in-vehicle information systems that, with some refinement, may serve as a measure of EBB distraction.

Olsson and Burns⁽³⁸⁾ describe a peripheral detection task (PDT) that is designed to measure visual distraction and driver mental workload. This study included measures of reaction time and correct detection rate for drivers who were asked to report the presence of an LED dot shown briefly at slightly different locations on a windshield while: 1) driving on country roads and a motorway and 2) performing a secondary task while driving. The dots were projected 11-23 degrees to the left of the straight-ahead view and 2-4 degrees above the horizon. This location approximates the visual angle that corresponds to a pedestrian or some roadside signs.

Statistically significant results indicated that a CD manipulation task and a backwards counting task required a longer performance time and resulted in fewer correct detections than the baseline driving task. Since these drivers missed more targets when performing a secondary task and because it took longer to report the targets that were spotted, the PDT may be useful in assessing the distractibility of in-vehicle systems. The authors briefly discuss the necessity of defining a criterion such as a percentage correct detection rate and/or reaction time that would define driver distraction.

If the PDT can be applied to in-vehicle systems, it may also be applicable to stimuli external to the vehicle such as EBB and tri-vision signs. It would be necessary to adapt the methodology from an in-vehicle task to a vehicle-external stimulus and to define a criterion for distraction. The PDT procedure might also be employed in addition to the driver performance measures described above, i.e., measures of lateral deviation and speed selection.

[< Previous](#)

[Contents](#)

[Next >](#)

[FHWA Home](#) | [Real Estate Services](#) | [Feedback](#)



United States Department of Transportation - Federal Highway Administration